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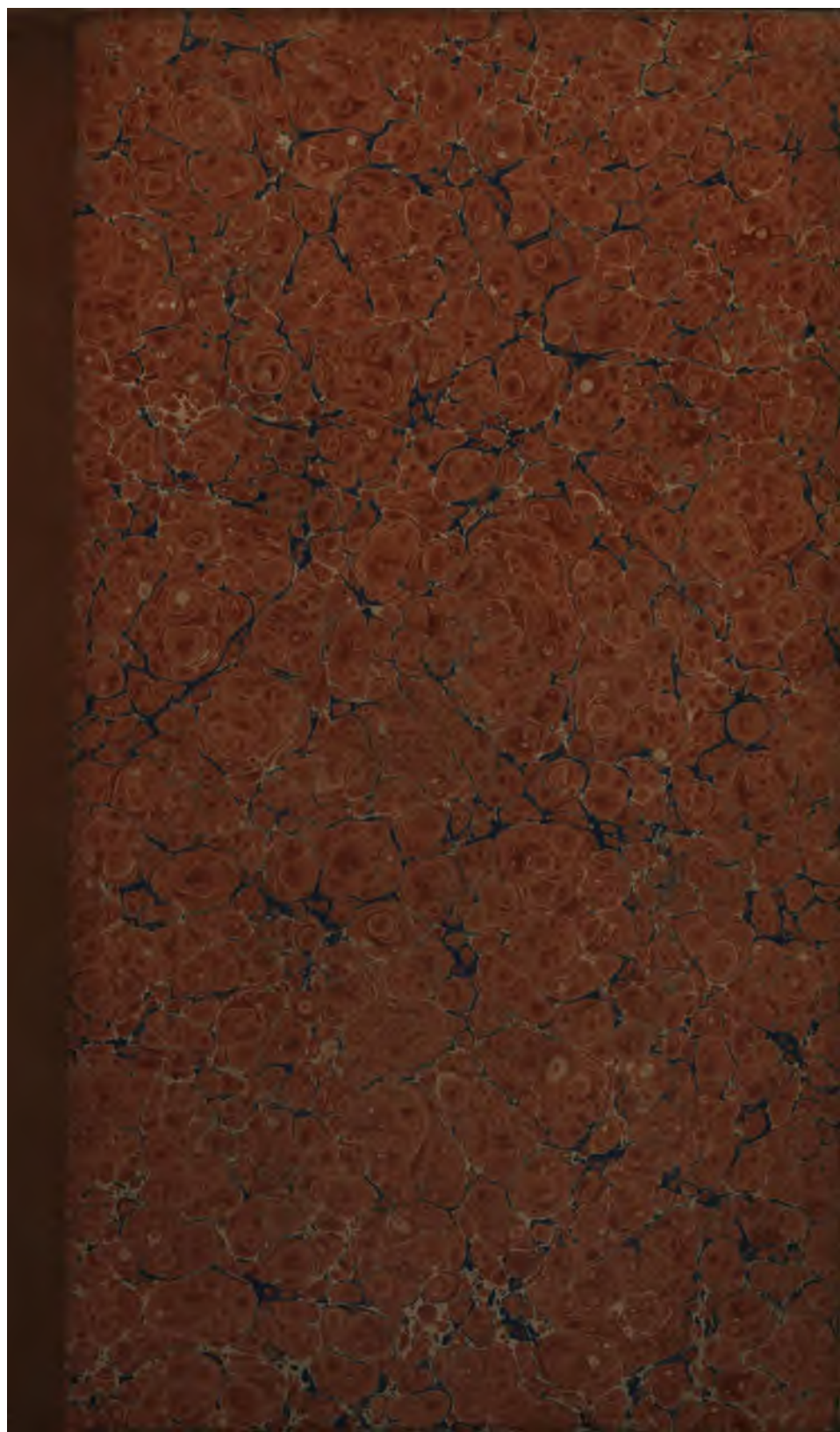
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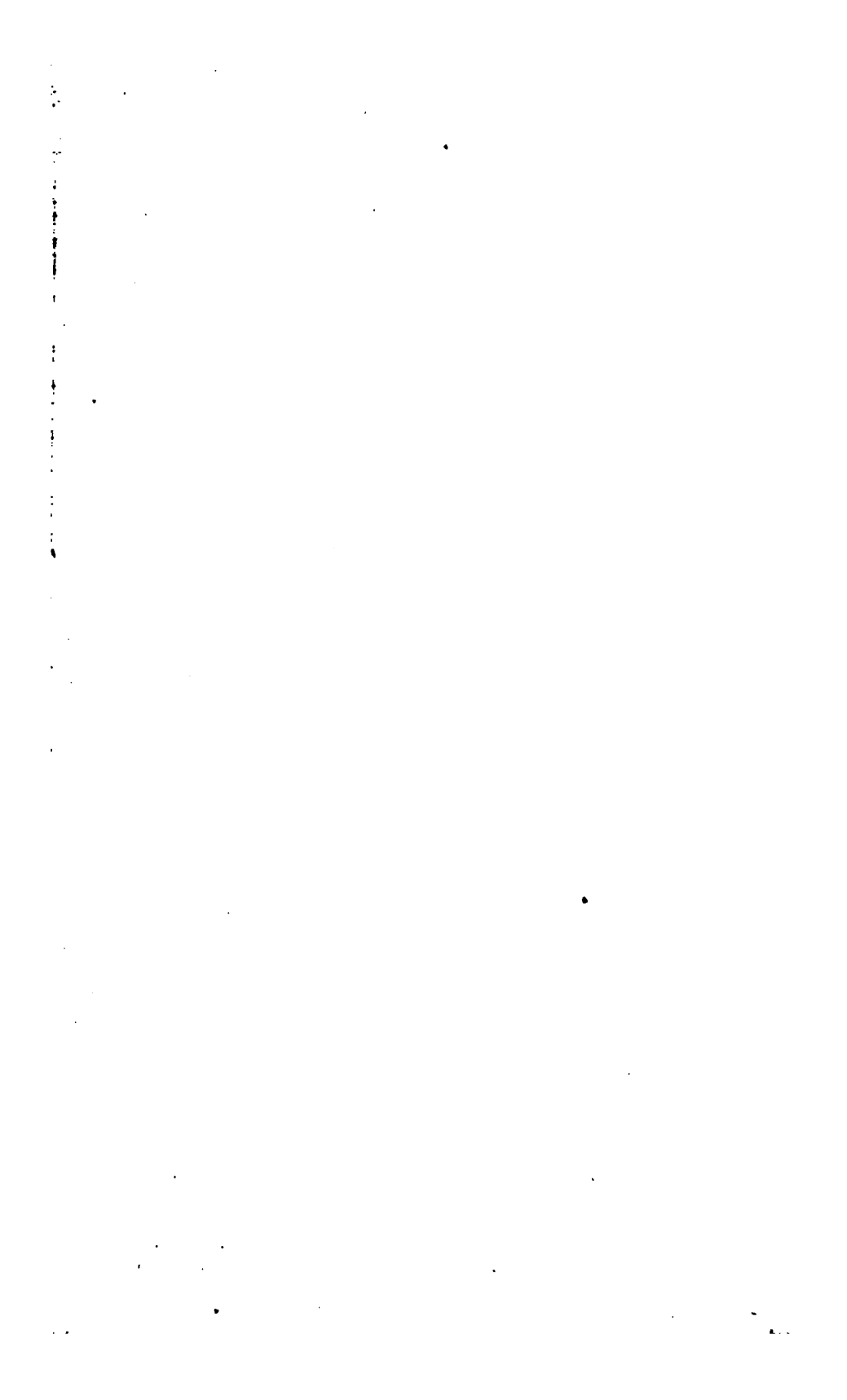
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# Sailing Directions

FOR THE

SOUTH, WEST, AND NORTH COASTS

OF

# I R E L A N D,

FROM

**CARNSORE POINT TO RACHLIN ISLAND;**

INTENDED TO ACCOMPANY A CHART OF THOSE COASTS,

Compiled from the Surveys

TAKEN BY ORDER OF THE RIGHT HONOURABLE THE LORDS COMMISSIONERS OF THE ADMIRALTY,

By MURDOCH MACKENZIE, SEN.,

AND FROM THOSE OF

HUDDART, MUDGE, MARTIN WHITE, AND OTHERS;

IN WHICH ARE DESCRIBED

*THE VARIOUS HARBOURS, ANCHORAGES, ROCKS, SHOALS. LIGHTHOUSES, TIDES, &c.*

~~~~~  
ORIGINALLY COMPILED

By J. W. NORIE, HYDROGRAPHER,

AUTHOR OF A COMPLETE EPITOME OF PRACTICAL NAVIGATION, ETC.

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**A New Edition,**

REVISED, AND CORRECTED TO THE PRESENT TIME,

By J. S. HOBBS, F.R.G.S.

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1847.



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ANY REMARKS OR COMMUNICATIONS FROM OUR NAUTICAL FRIENDS, FOR THE FUTURE  
IMPROVEMENT OF THIS, OR OTHER OF OUR WORKS,  
ARE RESPECTFULLY SOLICITED.

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*Entered at Stationers' Hall.*

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A USEFUL TABLE FOR FINDING THE DISTANCE OF AN OBJECT BY TWO BEARINGS,  
AND THE DISTANCE RUN BETWEEN THEM.

Difference between the Course and Second Bearing in Points of the Compass.

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# Sailing Directions

FOR

THE SOUTH, WEST, AND NORTH COASTS

OF

## I R E L A N D.

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*Throughout the following Work the Soundings are those taken at low water, spring-tides; and the Courses and Bearings are magnetic. The Variation from  $2\frac{1}{2}$  to  $2\frac{3}{4}$  Points is allowed.*

*An order, recently issued by the Lords Commissioners of the Admiralty, states, that in order to prevent mistakes, which frequently occur from the similarity of the words starboard and larboard, in future, the word PORT is to be substituted for larboard, in H. M. ships or vessels.*

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### FROM CARNSORE POINT TO CAPE CLEAR.

**CARNSORE POINT** is the south-east point or extremity of Ireland, in latitude  $52^{\circ} 11'$  north, and longitude  $6^{\circ} 23'$  west, and bears from Cape Cornwall N. by E.  $\frac{1}{2}$  E., distant 42 leagues; from the Smalls light N. by W.  $\frac{1}{2}$  W., 37 miles; and from St. David's Head N.W.  $\frac{1}{2}$  N., distant 42 miles.

**TUSKAR.**—About E.S.E.  $\frac{1}{2}$  E. from Carnsore Point, distant 6 miles, lies the *Tuskar*, a very remarkable rock, resembling a vessel bottom upwards, 20 feet above the level of the sea at high water, upon which is erected a LIGHTHOUSE, similar to that on the Eddystone, elevated 101 feet from its base. This light revolves, and has three faces, exhibiting two bright lights successively, like stars of the first magnitude, the one after the other, and then a light of a brilliant red colour, each of these lights appearing at intervals of 2 minutes. After being at their brightest state, they gradually become less luminous, and are eclipsed. The bright lights may be seen, when the weather is clear, at the distance of 5 leagues, and the red one about 4 leagues; while in dark or foggy weather, the tolling of a bell every  $\frac{1}{2}$  minute will warn the mariner of his near approach. This rock bears from the Longships lighthouse nearly N. by E.  $\frac{3}{4}$  E., distant 43 leagues; and from the Smalls lighthouse N.  $\frac{3}{4}$  W., distant  $34\frac{1}{2}$  miles. Upon the rock a telegraph is erected, forming a signal communication with the Irish coast. About  $\frac{1}{2}$  a mile S.W. of the Tuskar there are some *sunken rocks*, of 5 feet water; to avoid which, keep a mile from the S.W. side of the Tuskar.

**BAILLIES.**—Nearly midway between the Tuskar and the main is a *long narrow sand*, called the *Baillies*; the south end of which bears W.  $\frac{1}{2}$  N. from that rock, and E.S.E. from Carnsore Point; it thence extends N. by E.  $\frac{1}{2}$  E., 3 miles, with 3 fathoms on it, and 4 at each extremity. To avoid the Baillies on the east side, keep nearer to the Tuskar than the main. Near the sand in this channel are 16 fathoms. In the bay opposite to this sand, about  $\frac{3}{4}$  of a mile from shore, you may anchor, in 6 or 7 fathoms.

**BLACK ROCK.**—W. by N., 10 miles from the Tuskar, and W.  $\frac{1}{2}$  S., 4 miles from Carnsore Point, lies the *Black Rock*, always above water. Between the Black Rock and the shore, to the westward of Carnsore Point, is an anchorage, in 6 and 7 fathoms.

**THE BARRELS.**—Nearly a mile S.E. from the Black Rock are *two small rocks*, called the *Barrels*, which appear at half-ebb. To go to the southward and eastward of them, when sailing to the westward, keep Greenore Point open of Carnsore Point, until Black Rock bears N.  $\frac{1}{2}$  W., or is on with Ballyseaken Castle; you may then steer  
[S., W., & N. COA. OF IRE.]

W. by S. past the rocks that lie to the southward of Great Saltee Island, or to the southward of the Saltees light-vessel. Going to the eastward, keep above a mile to the southward of the Black Rock, and bring the Tuskar light to bear northward of east.

**THE SALTEES, &c.**—The S.W. point of Great Saltee Island lies about  $2\frac{1}{2}$  leagues west from the Black Rock. Off the north-west point of this island you may anchor, in 5 or 6 fathoms. Little Saltee Island lies about  $2\frac{1}{2}$  miles S. by W.  $\frac{1}{2}$  W. from Balliteige Castle Point, and is joined to the main by a *ridge of stones*, with from 6 to 9 feet over them, called *St. Patrick's Causeway*.

*Coningmore Rock*, which is always above water, lies  $1\frac{1}{2}$  mile S.S.W.  $\frac{3}{4}$  W. from the south point of Great Saltee Island. *Coningbeg Rock*,\* which appears at half-ebb, lies about a mile S.W.  $\frac{1}{2}$  S. from Coningmore, and from the south point of Great Saltee S.W.  $\frac{1}{4}$  S.,  $2\frac{1}{2}$  miles. When Coningmore Rock is on with the south end of the Great Saltee, you are to the eastward of Coningbeg Rock; when Coningmore is open to the eastward of the Saltee Islands, you are a little to the westward of it. The *two Brandy Rocks* lie off the south-eastern side of the Great Saltee, and are probably the same as those named the *Frail Rocks*.

The *Frail Rocks* are said to be nearly  $1\frac{1}{2}$  mile N.E. by E.  $\frac{1}{4}$  E. from Coningmore; and from the south-west point of Great Saltee S.E. by E.,  $1\frac{1}{2}$  mile; these are two rocks which appear at half-ebb. To go clear of them on the east side, keep the castle of Balliteige open of the east end of Little Saltee; to go clear of them on the south side, keep Coningmore Rock N.W. by W.  $\frac{1}{4}$  W.; and on the west side, keep Balliteige Castle just open of the west end of Little Saltee; or bring the south end of Great Saltee N.N.E.  $\frac{1}{2}$  E.

The *Tuns* are also *two rocks*, the positions of which do not seem to be accurately understood; they are said to lie to the north-eastward of Little Saltee, distant  $2\frac{1}{2}$  or 3 miles.

**SALTEES LIGHT-VESEL.**—A vessel, named the *Sea-Gull*, is stationed off the Coningbeg Rock, which bears from the Great Saltee Island S.W.  $\frac{1}{4}$  W., distant 3 miles, and west, 21 miles, from the Tuskar Rock. It exhibits three masts, from two of which, lights are suspended, one being higher than the other; they are visible, in clear weather, from 2 to 3 leagues. In day-time a flag is hoisted at the mast-head, and in dark weather a bell is kept tolling. But the mariner should not place too much dependence upon seeing these lights, for the vessel is liable to be, and, frequently has been, driven from her station, and replaced.

At  $\frac{1}{2}$  a mile to the northward of the south-west point of Little Saltee, lies a *small rock*, of only 3 feet. A cable's length S.W. from the same point is another *small rock*, which appears at half-ebb. Two *rocky shoals*, of 6 feet water, extending northwards, lie about  $\frac{1}{4}$  of a mile from the north-east end of Great Saltee Island. Between these shoals you may anchor with moderate southerly and south-east winds, the ground being clean. In order to avoid these shoals in going between the Saltee Islands, keep nearer to the Little Saltee than to the great one.

N.W. by N., about 8 miles from the S.W. point of the Great Saltee Island, is Bagenbon Head, the western boundary of Bannow Harbour, and to the northward of it is Ingard Point. At  $3\frac{1}{4}$  miles east of Bagenbon Head lie the Keeroog, or Bannow Islands; they are small, and two in number, with some *rocks* about them, which are nearly a mile distant from the main. E.N.E. from these, distant  $3\frac{1}{2}$  miles, is the Bar of Loch, a small narrow opening, leading to a large inlet of shallow water, of no use to shipping. The space from the Bar of Loch to Balliteige Castle Point, is called Balliteige Bay. Here, from half-flood, to half-ebb, on the shore, the stream runs eastward; and from half-ebb to half-flood the contrary.

At  $\frac{1}{2}$  a mile eastward from the entrance of Feathard Creek is a *rocky shoal*, of only 4 feet. From Ingard Point a *ledge* extends nearly half-way to this shoal; and a *shoal*, of 5 feet, called the *Bridge of Bricain*, extends about  $\frac{1}{2}$  a mile S.  $\frac{1}{4}$  E. from the point next to the northward of Slade Harbour. To avoid this shoal, keep any part of the Mountain of Fort, near Wexford, open of or without Bagenbon Head.

**FEATHARD**, on the north side of Ingard Point; and about 10 miles N.N.W. of Saltee Island, is a small dry harbour: betwixt the pier-heads are 8 or 9 feet at high

\* On Coningbeg Rock a lighthouse is in progress.

water, spring-tides, and 6 or 7 feet with neap-tides. From the point a *rocky ledge* extends eastward about 2 cables' length. To avoid it on the north side, when going in or out, keep an old castle, standing at the south end of Featliard Trees, on with the pier-head. About  $\frac{1}{2}$  a mile to the eastward of Ingard Point, there is a *long rocky shoal*; the least water on it is 5 feet. A leading-mark to it is a summer-house below Featliard Trees, on with the before-mentioned castle.

In SLADE BAY,  $1\frac{1}{4}$  mile to the N.E. of Hook lighthouse, vessels may anchor, and be sheltered from westerly and northerly winds. The ground is foul in the N.E. part of this bay. The mark for the best anchorage is, the pier-head and the castle in one, opposite to a stone-wall, which runs up a little way from the shore, in 5 fathoms, clear and sandy ground. Slade Harbour, about a mile to the eastward of Hook lighthouse, is dry at low water, and only fit for small vessels. Between the pier-heads are 11 feet at high water, spring-tides, and 8 or 9 feet at neap-tides.

**WATERFORD HARBOUR.**—From Great Saltee Island to Hook Point, on which Waterford lighthouse is erected, the bearing and distance are N.W. by W., 11 miles; and from the Longships lighthouse, off the Land's End, to Waterford lighthouse, N.  $\frac{1}{2}$  E., 43 $\frac{1}{2}$  leagues. When coming from the southward or the eastward for Waterford, bring Sleanaman Mount, a remarkable mountain inland, to bear N.E., until you see Hook lighthouse on the east side of the entrance of Waterford Harbour. This is an excellent lighthouse, rebuilt in 1796. The tower is white, 110 feet high from the base to the lantern, and 139 feet above the level of high water. It exhibits a bright fixed light, visible 17 miles off, from all points between E.N.E., seaward, to N.N.E. Go not nearer Hook Point than about 3 cables' length, to avoid falling into irregular streams of tide that run near it.

Having passed the Hook, and intending to proceed for the anchorage at Passage, take a flood-tide, or a leading wind, and steer for Creden Head, giving it a berth of at least  $\frac{1}{2}$  a cable's length. From Creden Head, steer N.E. by N. for Duncannon Fort, carefully avoiding the *sand banks* which extend from both shores. That on the starboard side begins at Bluff Head, on the *spit* of which a buoy is placed; it runs more than  $\frac{1}{2}$  a mile from shore, and terminates at Duncannon Fort. Between Bluff Head and Duncannon Fort is Ballistraw Bay. The *sand* on the other side, called *Drumore Bank*, extends more than a mile from shore, and narrows the passage abreast of Duncannon Fort to about  $\frac{1}{4}$  of a mile. On this part of the bank are three buoys. The thwart-mark in the narrowest part of the channel is, Father Hogan's house on with Newton trees. Two lights in Duncannon Fort, one above the other, are exhibited, to direct vessels to that point. An additional lighthouse has lately been erected N.N.E.  $\frac{1}{4}$  E. from Duncannon Fort lighthouse, distant  $5\frac{1}{2}$  cables' length. These two lights kept in a line, will lead in the best channel across the bar, between the eastern and the middle buoys on the bar. The tower of the new lighthouse is circular, and of a white colour; it exhibits a fixed bright light from a lantern elevated 121 feet over the mean level of the sea. The lower light from the fort lighthouse is now only shown from half-flood to half-ebb. About  $\frac{3}{4}$  of a mile northward of Creden Head is a *bar*, composed of loose shingle, which stretches across, and is little more than a ship's length over. On this bar are three buoys. In northerly winds there are only 13 feet water on it; but with southerly winds 26 feet. The deepest water is towards the starboard shore. Between the bar and Duncannon Fort are from  $2\frac{1}{2}$  to 8 fathoms; deepest nearly abreast of the lights. When above the lights, keep near the eastern side, steering about N.  $\frac{1}{2}$  W. for the Church of Ballyhak, leaving three buoys on the Drumore Bank, on your port or larboard hand, until the perch, which is fixed on the upper end of Drumore Bank, comes on with the town of Passage; you may then steer upward, N.W. by N., in mid-channel. Abreast of this perch are 10 and 11 fathoms. The usual anchorage is about a mile above Passage Town, in 5 or 6 fathoms. A small tongued *shoal* runs off southerly from Ballyhak Point, for above  $\frac{1}{2}$  a cable's length, the southern part of which has only 3 feet on it at low water; therefore, in passing, keep nearer to the perch.

At 2 or 3 miles above Passage is very good anchorage, and there the stream is much weaker than at Passage. In proceeding for this place, avoid a *spit of sand*, called the *Seedes Bank*, which stretches off about W.S.W. from Buttermilk Castle, extending about half-way over to the opposite side. The least water on it is 9 feet. Avoid also a *small bank*, of 9 feet at low water, and 14 feet at half-tide, which lies about 2 cables' length from the eastern shore, between Cheek Point and Buttermilk Point. In pro-

ceeding about low water, keep in the middle between the two points; if the flood-tide be running, keep in the rough part of the stream, and you will go clear of the shoal. Vessels drawing not more than 10 or 11 feet water, may go up to Waterford, where there are 3 fathoms at low water, a ship's length from the quay. The safest channel to Waterford is on the north side of Little Island. The channel on the other side is deeper; but it is narrow, winding, and subject to eddy tides, which make it dangerous.

**DUNMORE HARBOUR.**—On the S.W. side of Dunmore, or Whitehouse Bay, at the distance of  $1\frac{1}{2}$  mile W.S.W. from Creden Head, a pier or sea-wall has been built, extending from the point a considerable distance eastward, thereby forming a harbour, to which H.M. packets resort from Milford. At the end of the pier, which is on the south side of the harbour, stands a lighthouse. The lantern exhibits two faces; the one seen to seaward, from west to W.S.W.  $\frac{1}{2}$  S., appears of a red colour, and will be visible some time before you pass the Hook lighthouse; the other, when seen from within the harbour, is clear and bright, but not visible up the harbour beyond Creden Head. This building is white, and the lantern 44 feet above high water. It is high water, full and change, at 5h. 18m.

Captain Martin White, R.N., says, "Though Dunmore Pier affords a secure anchorage from westerly gales, as well as from the prodigious sea which rolls along the south coast of Ireland; yet it is ill calculated for a refuge harbour, from its very confined space, and from its shallowness, there being within the pier-head only one spot with more than 14 feet, and 9 to 12 being its usual depth at low water."

**SWINEY HEAD**, on the west side of the entrance of Waterford, is opposite to Hook Point, distant therefrom  $3\frac{1}{2}$  miles N.W.  $\frac{1}{2}$  W. To the southward of this head there are three small islands, called the Eiles Kirt, which are steep-to.

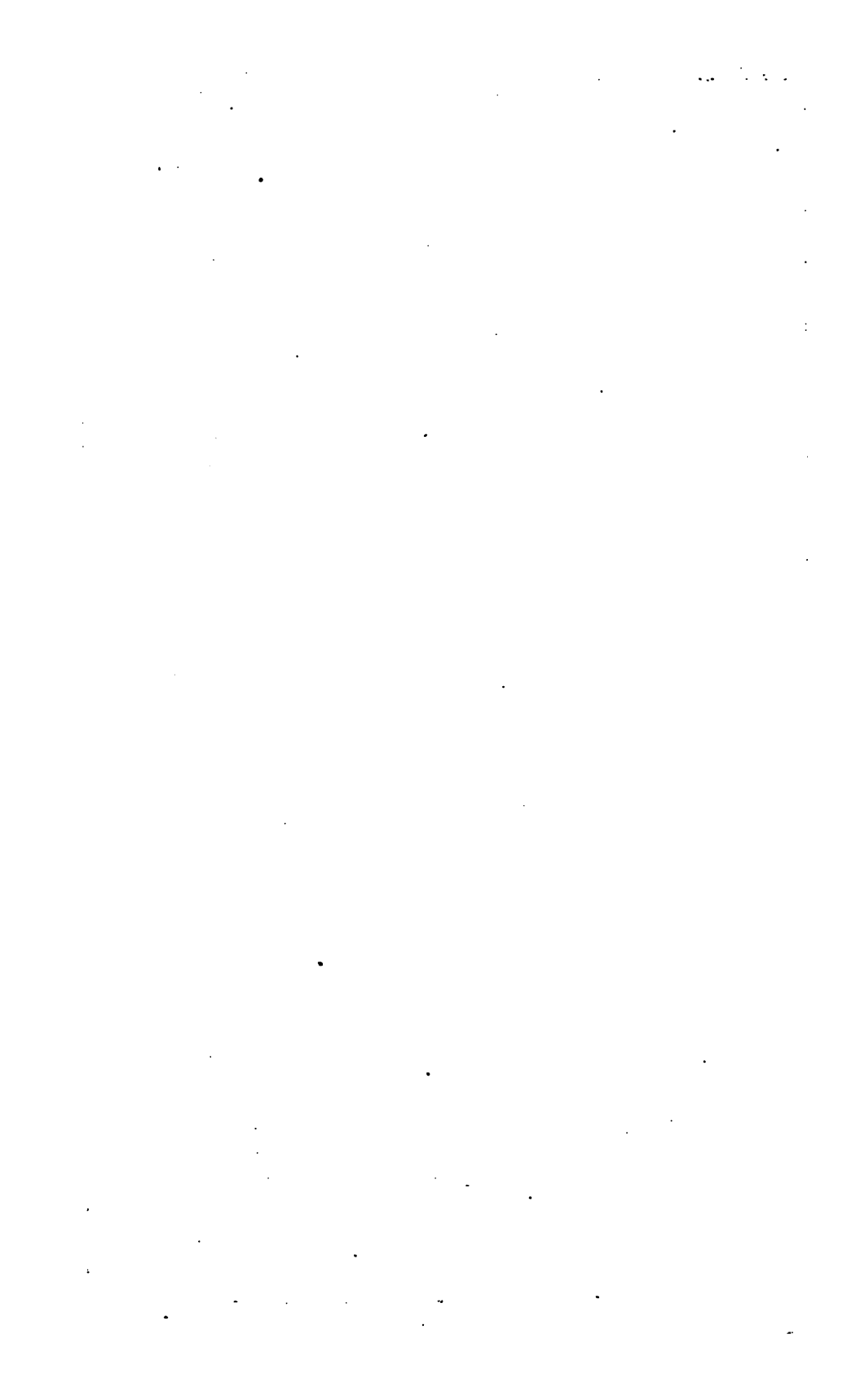
**TRAMORE BAY**, about 4 miles westward of Swiney Head, and  $6\frac{1}{4}$  miles to the westward of Hook lighthouse, is a dangerous part of the coast, and must be carefully avoided. In hazy weather, when the Hook tower cannot be seen, this bay has been frequently taken for the entrance of Waterford Harbour; and many ships have thereby been lost. Hard southerly winds drive a heavy sea into it, and the flood-tide sets with great velocity toward Rineshark Harbour; which, operating jointly, render it almost impossible for a ship so caught in the bay, to get out of it by plying to windward; and in case of coming to an anchor, the ground is so *foul* and *rocky*, that ships are frequently lost. The N.W. part of the bay is the only place where there is a possibility of escape; the east side being so shoal and full of *rocks*, that ships unfortunately forced on that side, become involved in terrible breakers at a considerable distance from shore.

**RINESHARK HARBOUR** is on the eastern side of Tramore Bay, and may be entered by small vessels with a pilot. In the shallowest part of the channel are 9 or 10 feet water at half-tide; but it is narrow, without either perches or buoys. And as the danger of getting aground on the point of a *sand* which lies at the entrance, is great, no stranger should attempt to go in unless absolute necessity requires. In that case, endeavour to have 4 hours' flood, and to keep within a cable's length of the star-board shore, notwithstanding the appearance of breakers on that side, until you are nearly a mile up, where the water is smoother. But if embayed here, when the wind renders it impossible to be extricated, run on shore anywhere near the west side of the bay, rather than attempt the harbour, which will afford the best means of safety.

Three towers have lately been erected on Great Newton Head, the western boundary of Tramore Bay; and two on Brownstown Head, its eastern boundary, by which it may now be readily distinguished from the entrance of Waterford, or any other part of the coast. On the central tower is the herculean figure of a man, with one arm pointing towards the Hook lighthouse.

**DUNGARVON HARBOUR.**—Helwick Head, the south point of Dungarvon Bay, bears from Hook Point W. by N.  $\frac{1}{2}$  N., distant 22 miles. Vessels drawing not more than 10 feet water, may here have good shelter, and lie on clean sand when left by the tide. But such vessels should not go in until near high water. In the shoalest part of the channel are 3 feet at low water. At Dungarvon Quay are 9 feet at high water, spring-tides, and 7 feet at neap-tides. At a short distance from the quay the water is 2 or 3 feet deeper.

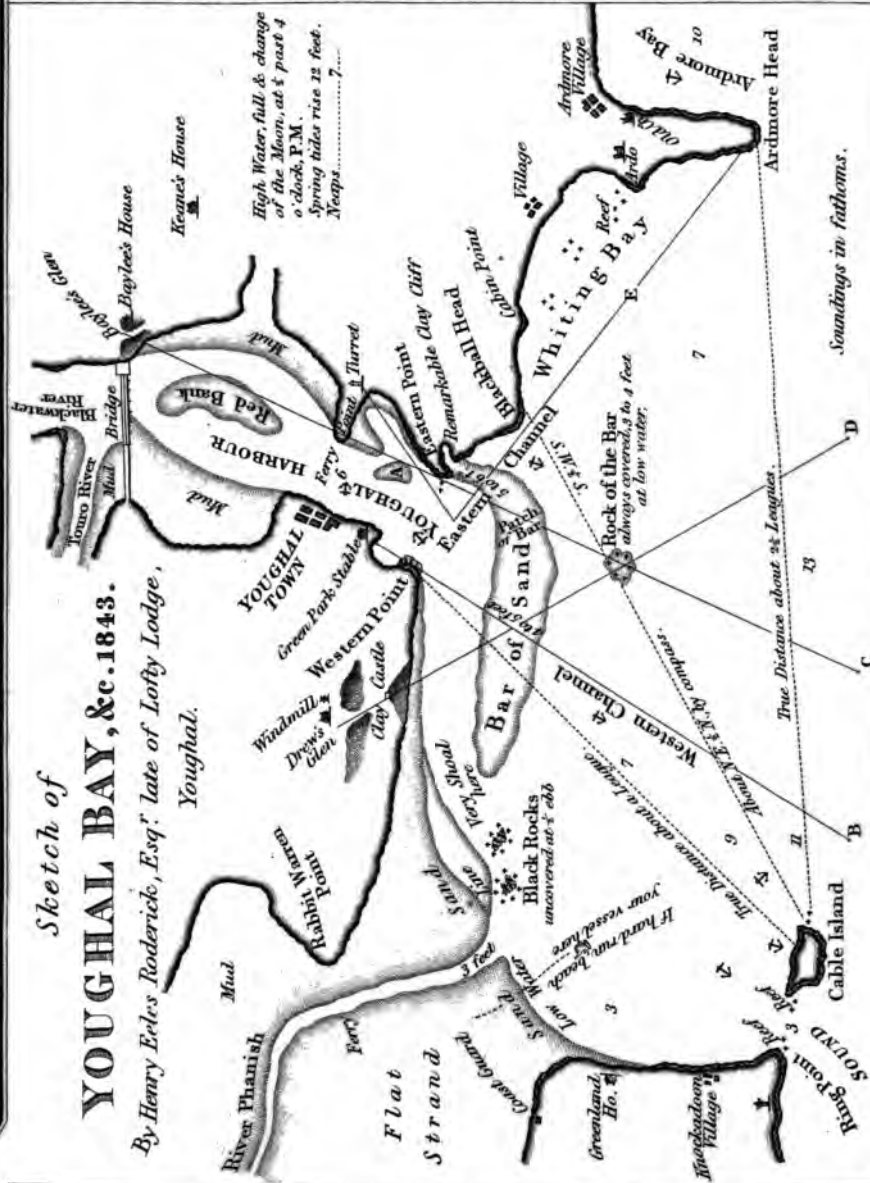
To fall in with Dungarvon Bay, keep Cruach Hill, the westernmost and most tapering of the Dungarvon Mountains, N.  $\frac{1}{2}$  E. In the mouth of this bay are *two rocks always above water*. The largest, called *Carrickapene*, lies nearly in the middle. You





# Sketch of YOUGHAL BAY, &c. 1843.

By Henry Eckles Roderick, Esq<sup>r</sup>. late of Loftly Lodge,  
Youghal.



## Observations.

A Scale & Compass has been purposely omitted, running across Bay by compass, in thick weather & strong tides is a very doubtful proceeding.

The Bearing and Distances given are correct; they stand good as far as they go, but it is not intended that the bearing of other objects should be ascertained by them. The chief object of this Chart Diagram is to point out to the Mariner the shape of the Bay, & the dangers, and to give the situation of the Land Marks. The depth in the Channels is given at the very lowest year of a spring tide; a foot or two more may be found in the Channels at ordinary low water. Vessels drawing 27 feet have entered Youghal, & the Fortified is a good one.

## References.

- A. A Bank not unwarving called Dutch man's Ballast.
- B. Green Park Stable on with the Western Point, leads through the Western Channel, over the Bar, and where the line D crosses B, shows the shoal-est part of that Channel.
- C. Bayley's Glen or House, on with the Eastern Point, and
- D. Dren's Glen on the heights of Clay Castle, are the cross marks for the Rock of the Bar.
- E. Ardmore Head open off Blackhall Head a handspike length, leads through the Eastern Channel, over the Bar.

may pass on either side of it, giving it a berth of  $\frac{1}{2}$  a cable's length. From the other rock runs a *ledge*, which extends to the shore of Ballinacourty. The *rock*, called the *Gainers*, lies about  $\frac{1}{2}$  a mile to the northward of Helwick Head, extending about  $\frac{1}{2}$  of a mile from east to west, and has on it, with ordinary spring-ebbs, about 2 feet. To avoid this rock on the north side, keep the Abbey of Dungarvon on with the highest part of a hill situated about 2 miles north-westward of the town; or by keeping within a cable's length of Carrickapene, and giving Helwick Head a berth of about  $\frac{3}{4}$  of the distance between it and Carrickapene.

A *dangerous ridge of sand* extends southward along Ballinacourty Point, and dries at low spring ebbs, making the channel there very narrow. To go between this ridge and the shore, keep about  $\frac{1}{2}$  a cable's length from high water mark; or keep Ryland's turret N. by W., in a line with the sharpest top of Knockmedown Mountain.

To wait for the tide to go up to Dungarvon, anchor off the house of Ballinacourty, about  $\frac{1}{2}$  a mile from the shore, because there the ground is best. About half-flood (attempt not to proceed sooner) steer for Ballinacourty Point; and when you are near the house, keep about  $\frac{1}{2}$  a cable's length from that shore; or keep Ryland's turret on with the sharpest point of Knockmedown, until you pass the point; then N.W. by W., till Ryland's turret appears in a line with the summit of Cruach hill: then steer N. by W. for Coneymar Point; or proceed with the old castle, at Dungarvon Quay, on with the highest top of Knockmedown Mountain, and come to anchor off the town.

**YOUGHALL BAY, BAR, and HARBOUR.**—Ardmore Head forms the eastern extremity of Youghall Bay, and Cable Island and Ring Point its western. Youghall Harbour lies between Cork and Dungarvon Harbours, about 5 leagues from the latter, and 7 leagues from the former.

Across the harbour's mouth is a *bar of hard sand* (not shifting), free from rocks; but outside, and near it, lies a *small patch of rocks*, commonly called the *Rock of the Bar*, which is always covered, and has at low water, spring-tides, not less than 3 feet on it. This rock was formerly omitted in all Directions; and was not on any chart, until placed on the sketch annexed.

The public are indebted for that, and the description we now give, to a scientific gentleman, Henry Eeles Roderick, Esq., who resided in Youghall over 30 years, kept a yacht, and took pains to acquire (having a fancy that way) a minute knowledge of this bay, bar, and harbour.—“This rock is exceedingly dangerous, lying open in the bay, and never uncovered. It lies off the harbour's mouth about a mile, and outside, near, but distinct from the bar. The bar itself commences outside, and near to the eastern point of the harbour, off a remarkable deeply-indented clay cliff, and near the eastern point. (See the sketch.)

“The bar runs out to sea, from near this cliff, about  $\frac{1}{2}$  a mile, and sweeps away to the westward, first turning and forming part of a crescent, shoaling gradually in-shore from the Western Channel. It extends totally across the harbour's mouth. There are two channels over it in use, the Eastern and Western; the Western being a channel you may take with a flowing sheet, with in-shore winds; when you will be on a wind (sometimes braced sharply up, and a rocky shore under your lee) in taking the Eastern.

“In running for the harbour, I prefer the Western Channel, though the Eastern may be deeper by a foot or two. In coming out, I prefer the Eastern with an in-shore wind. A vessel in the bay may safely stretch across from Cable Island towards Ardmore Head, and a view may be taken of the form of the bay, and the in-shore objects I call attention to. Observe the windmill (now 1843) there on the hill, at the west side of the harbour's mouth, within a field or two of which is Drew's Glen; and down on the beach, beneath the glen, to the west of the harbour's mouth, stands a small hill, or rising ground, about 100 feet high, called Clay Castle, the base of which is frequently washed by the sea at high tide. This hill (lowering every year) and Drew's Glen, back of it, about  $\frac{1}{2}$  of a mile, are most useful land-marks, as will appear presently. Look on the western point of the harbour; inside of which, and near it, stands Green Park stables. Now, to take the Western Channel, keep these stables (or the angle of the high wall close to them) and the western point of the harbour in a line, and run in for the Western Point. When you bring Drew's Glen and the highest part of the hill, called Clay Castle, in a line (at your port or larboard hand), you are going over the bar; and having passed those marks, you will deepen the water. Give the Western Point a good

berth, and run up the harbour, and anchor abreast of the town, in 6 fathoms at low water.

"Baylee's Glen, and the dwelling-house close to it, stand almost at the head of the harbour, on the side of the hill, at the starboard side of the harbour a little. There are now (1843) trees about it. Carefully remark this Glen (that cannot alter) and house, because, at some distance (a short one) to the east of it, stands another dwelling-house. (Don't mistake.) On Baylee's Glen and house depend much as to the Rock of the Bar. Opposite to the town is a low sandy point, called the Ferry Point; and on the inner part of the point is a turret. The eastern point of the harbour lies to seaward of this turret; and at a short distance from the harbour's mouth, on its east side, lies a bluff head (a bold shore), called Blackball Head. There is excellent anchorage close to this head, and shelter, in a north or N.E. gale. Observe also the situation of Ardmore Head; and Whiting Bay lies between it and Blackball Head.

"When about to enter the Eastern Channel, look sharp to avoid the Rock of the Bar; its position I will show. It lies between Blackball Head and Cable Island, being about  $\frac{1}{2}$  nearer Blackball Head than the Island—say  $\frac{2}{3}$  from Cable Island and  $\frac{1}{3}$  from Blackball Head. The land-marks for the rock are, Baylee's Glen, or house, on a line with the Eastern Point; and Drew's Glen on a line with the top of Clay Castle. Where these lines intersect one another, is the Rock of the Bar, over which, and the bar, breaks a tremendous sea with in-shore gales; but once over the bar, the harbour is a safe and good one.

"To take the Eastern Channel, run boldly in for Blackball Head; and when close in with it, ease away for the western point of the harbour, nearly (give it a little northing), but keep a handspike's length of Ardmore Head open off Blackball, until you run across the harbour's mouth, so far as to see the turret on the inner part of the Ferry Point; and then run up for the anchorage, giving the port or larboard side the preference. The tide is full, on the full and new moon, at half-past 4 o'clock, P.M. The depth of water in the Eastern Channel, at low water, spring-tides, is about 5 to 6 feet; at neap-tides 7 to 8 feet; and in the Western Channel say a foot less. The depth of water in the channels is laid down under what it generally is: it is laid down at the very lowest veer of spring-tides, with cutting-off winds. The mariner may find a foot or two more than set forth of low water; so much the better for him. A sloop of war may, at times, enter Youghall Harbour through the channels; and vessels drawing 16 feet, may pass the bar, of course at high water (or near it), in moderate weather.

"The tides rise about 12 feet on the spring, and 7 on the neap; and they rise uniformly by degrees, and not unequally. There is no peculiarity in the rise or fall of tides here in the usual weather; but in strong gales, on or off shore, they are proportionally raised or depressed. I give the tides somewhat lower than they are in reality. Good anchorage may be found close to the north of Cable Island; and a vessel may bring-up there under the lee of the island, with in-shore winds, and wait tide to run for the harbour, or ride out a gale. In a S.W. gale, Ring Head affords shelter; and it is clean sandy ground along this headland. When running from Cable Island to Blackball Head, you are running directly for the Rock of the Bar.

"To the N.W. of the bay, and inside of Cable Island, lie some patches of rocks, called the *Black Rocks*, uncovered at half-ebb, but totally out of the track of vessels going into Youghall, yet worthy of remark, as they have proved ruinous before to vessels obliged to run on shore. If a vessel must be beached in Youghall Bay, with east, S.E., or southerly gales, the flat strand in the N.W. part of the bay, about  $\frac{1}{2}$  a mile in-shore from Cable Island, is the best place. In this case of dire necessity (to save lives), I would close Cable Island, and skirt the western headland (Ring), about 3 or 4 cables' length distant, gradually bringing Cable Island nearly astern, and beach in the midst of breakers. There, owing to the flat nature of the shore, the tide ebbs very far, and there is every chance of escape; but do not run ashore till you pass the high land on the inner part of Ring Headland. Run for what appears quite flat, under your lee, keeping as close to the western headland as you can; but do not beach on it. By this course you will beach on sand, and leave the Black Rocks to the starboard, between you and the harbour's mouth. There is a coast-guard station near to the flat strand.

"In beating to the westward for Youghall Harbour, if it cannot be gained, a gale at S.W. may be cheated, by a vessel coming to an anchor to the east side of Ardmore Head, as there is good anchorage close along the east side of it; however, this remark

only applies in case better cannot be done; no man will anchor there, or beach his vessel, if he can avoid it."

**BALLICOTTON ISLANDS** lie nearly 6 miles W. by S. from Cable Island. In the middle, between the two Ballicotton Islands, is a small *rock*, dry at very low spring-ebbs. About a mile W.N.W. from Ballicotton Islands lies another *rock*, called the *Smiths*, which is also dry at low spring-ebbs. To avoid this rock on the south side, keep about  $\frac{1}{2}$  a mile from shore; or keep Cable Island open without Ballicotton Islands. Poor Head is about 8 miles W. by N. from Ballicotton Islands: and about 4 miles N.W. by W. from Poor Head, is the entrance of Cork Harbour.

**BALLICOTTON BAY.**—The following remarks on this bay were written by Lieutenant Samuel Coulson, R.N., at Ballicotton, in 1834:—

"Three years' observation has convinced me that the mercantile interest has in many instances suffered, in consequence of vessels, when bound to Cork, or ports westward, and obliged to bear up by westerly gales, instead of taking shelter under the high western land of this bay, have run for the dangerous bar-harbour of Youghall, or even farther eastward, thereby risking their safety in attempting Youghall,\* and possibly otherwise causing loss and delay to owners; whereas, by taking this bay, they would not only have been within 2 or 3 hours' communication with Cork by land, and about 10 miles distant from the harbour's mouth, but ready to take advantage of the first favourable change.

"The only disadvantage of this anchorage is, that the wind setting in from S.E. to E. (which wind, however, very seldom blows), renders it necessary for vessels to put to sea as quickly as possible. The prevailing winds on this coast are westerly, throughout the year; therefore the anchorage is safe and convenient with the wind from S.W. to N.N.E., by the north. Vessels taking shelter here from a westerly gale, should anchor with the government houses bearing S.S.W. to S.W., and the outer island S.E. to S.S.E., in about 3 fathoms at low water. The bottom is smooth and even, of fine sand and clay, perfectly clean, and the holding-ground good.

"The outside island is high, with a bold rocky coast, steep-to, with deep water, and no dangers; so that a vessel, in taking the bay from the westward, may round the island close to, and find herself suddenly in smooth water. A vessel attempting the sound, should keep the S.E. island close aboard, as there is a *dangerous reef of rocks*, which shows at low water from the N.E. point of the inner island, running out about E.S.E. to about mid-channel. The depth of water through the sound, is from 5 to 7 fathoms."

When proceeding towards Cork Harbour from the eastward, the shore should not be approached within  $\frac{1}{2}$  a mile when between Croneen Bay and Roche Point, particularly in the neighbourhood of Poor Head, off which are the following *rocks* and *patches*, viz.:—*Hawk Rock*, having only 10 feet on it, lies S.S.W. from the Head, distant 2 cables' length. The *Quarry Rock* lies 3 cables' length east of the Hawk Rock, having only 3 feet upon it: it lies with the pitch of Poor Head bearing N.W. by N., distant 3 cables' length. The *Pollock Rock*, of  $4\frac{1}{2}$  fathoms, lies with Poor Head bearing N.W.  $\frac{1}{2}$  N., distant  $1\frac{1}{2}$  mile; and in Croneen Bay there is a *patch of foul ground*, lying full  $\frac{1}{2}$  a mile from the shore, having only  $7\frac{1}{2}$  feet water on it; this lies with Poor Head bearing west, distant 2 miles.

**CORK HARBOUR.**—From the Longships lighthouse, off the Land's End, to the entrance of Cork Harbour, the course and distance are N. by W.  $\frac{1}{2}$  W., 46 leagues; and from St. Ann's Point, Milford Haven, N.W. by W.  $\frac{1}{2}$  W., nearly 39 leagues. Coming from the southward, and bound to this harbour, keep Knockmedown Hill about N.E. by E., until you see the Old Head of Kinsale, a bluff point of land, with a lighthouse on it. From this head the entrance of Cork Harbour lies E.  $\frac{1}{2}$  N., distant about 5 leagues. When off the harbour, Roche's tower, with its lighthouse, on the east point of the entrance, is a remarkable object. A little without the point, on the east side of the entrance, lie the *Cow and Calf*, or *Stag Rocks*.

This is, excepting Bantry Bay, the only port on the south coast of Ireland fit to receive ships of the line, which, with a leading wind may, at all times in the day, enter,

\* We trust, that the preceding perspicuous directions for Youghall Harbour, by our friend, Mr. Roderick, will in a great measure alleviate the anxiety attending the above remark.—(Ed.)

by attending to the marks that lead clear of the Harbour Rock and Turbot Bank, both of which have buoys placed on them, as will be seen hereafter.

There is clean ground in a moderate depth without the harbour's mouth, where ships may, with a northerly wind, in from 7 to 10 fathoms, wait for the flood or daylight.

The lighthouse on Roche Point is erected at the east side of the entrance of Cork Harbour, on which a light is exhibited from sun-set to sun-rise. The light is fixed, or steady, of a clear red colour towards the sea, but towards the harbour it appears bright. The tower is white, 26 feet in height; and the light, which appears at 92 feet above the level of high water, may be seen at 14 miles off, from all points seaward, between S.E. by E. and N. by E. From it Cork Head bears S.W. by W., distant about 4 miles.

ROCHE POINT, on which the lighthouse stands, may be safely approached to within a cable's length after passing the Cow and Calf (or Stags) Rocks. Dog's Nose, a high point on the eastern shore farther in (on which is a remarkable white wall on the face of the cliff, to the southward of the fort, which may be seen a considerable distance), should have a berth of  $1\frac{1}{2}$  cable's length given to it in passing. Between these two points is White Bay, where the *flat*, of 3 fathoms, runs off full 2 cables' length from the shore.

The western shore of the entrance may be approached to within a cable's length, until you arrive at the Turbot Rock, to the northward of which a *spit* runs off, having only 4 fathoms on it, full 3 cables' length from the shore, and on which the first or southernmost white buoy is placed.

The *Harbour Rock*, of  $2\frac{1}{2}$  fathoms, which is surrounded by a *shoal*, of 4 fathoms, to near a cable's length, lies  $3\frac{1}{2}$  cables' length N.W.  $\frac{1}{2}$  N. from Roche Point. This rock lies near the middle of the entrance, and is the first danger to be avoided in going in. There are two buoys on this shoal, lying E. by S.  $\frac{1}{2}$  S. and W. by N.  $\frac{1}{2}$  N. of each other, distant  $1\frac{1}{2}$  cable's length: the eastern buoy is painted white, with a red rim; and the western one red, with a black rim. The eastern buoy lies with Cusshkenny House (a white house, very remarkably situated among the trees to the eastward of the town of Cove) over the lowest point of land at Dog's Nose.

The *Turbot Rock*, on which the least water is 19 feet, lies  $\frac{1}{2}$  of a mile N.N.E. from the Harbour Rock: it extends about a cable's length from east to west, having 4 fathoms on its outer edges. There are two buoys placed on this shoal, about a cable's length apart, bearing W.N.W.  $\frac{1}{2}$  N. and E.S.E.  $\frac{1}{2}$  S. of each other: the eastern buoy is painted white, with a black rim; and the western one red, with a white rim. There is a good channel, with 6 fathoms in it, on either side of the Turbot Rock; and between it and the Harbour Rock are 8 to 9 fathoms. The channel eastward of the Harbour Rock is considerably narrowed by the flat that runs off from the eastern shore, above Roche Point, which leaves the channel of 6 fathoms little more than a cable's length in width. The channel to the westward of the Harbour Rock has from 8 to 11 fathoms in it, and the most room for a large ship to work through.

A white buoy lies about 2 cables' length north of the Turbot Rock, on the spit that runs off from Ram Point, on the western shore. Between the Turbot Rock and the town of Cove there are nine white buoys, which mark the western boundary of the channel, and to be left on your port or larboard hand going in: and between Fort Carlisle and the Bar Rock, at the entrance of the passage to Cove, there are six black buoys, on the eastern side, on the edge of the extensive flat that stretches to the north-eastward: these are all to be left on your starboard hand going in. Between the third and fourth black buoys, and nearly east from Spike Island, is the Man-of-War's Road, where there are 8 to 10 fathoms in the channel. Close to the southward of the fourth black buoy is the entrance of the East Channel, leading to East Passage, and to the town of Ballynacurra.

At the entrance of the passage to Cove lies the *Bar Rock*, of 16 feet. On the north side of this rock the seventh white buoy is placed. About 160 fathoms to the south-westward of this is the Lower Spit buoy, No. 8, also white. Between the latter buoy and the Bar Rock there is a channel, of  $3\frac{1}{2}$  fathoms at low water; but large ships should pass to the eastward of the white buoy on the Bar Rock before they haul round to the westward. The Middle Spit buoy (white, No. 9) lies N.W. by W., about  $\frac{1}{2}$  a mile

from the Lower Spit buoy, in 9 feet, on the north edge of Haulbowling Spit Bank. Off this buoy is the anchorage at Cove: here the tide runs 2 or 3 knots. It is high water, on the full and change, at 5h. 3m.; and the tide rises from 10 to 12 feet.

The capacity of the Ship Channel into Cove Harbour is very much straightened by the steep flats on each side, no part thereof exceeding the breadth which the channel is between Forts Carlisle and Camden, which is about 270 fathoms; from whence it winds circuitously between the buoys, narrowing at the same time as you proceed northerly; so that no one leading-mark can be acted upon continuously from the harbour's mouth; though, by attention to the buoys and the lead, a vessel may be worked in or out at any time, as, at present, the channel is well defined by the positions of the buoys on the shoals.

Those working in or out of Cork Harbour, should be aware that the tide sets, in the first instance, into the bight formed between Roche Point and Dog's Nose (or White Bay), and thence obliquely across to Cross Haven, whence it is again warped into a north-easterly direction, which produces corresponding counter-tides and eddies along both shores. The ebb-tide has a directly opposite tendency.

There are good channels on either side of the Harbour Rock and Turbot Bank, or between them.

On coming in, endeavour to pass between Roche Point and the Harbour Rock, or between the latter and the Turbot Bank. The first route may easily be effected, by keeping Cuskhenny House wholly shut in with the point at Dog's Nose. This mark also leads to the eastward of the Turbot Bank, in 6 or 7 fathoms. To pass between the Harbour Rock and Turbot Bank, keep the white house in Ringabella Bay twice its own apparent breadth open to the southward of Kenly Cove Point.

The best place for large ships to anchor in is the outer road, between Fort Camden and the buoy of the spit. You may proceed to it with Cove Church just shut in with the eastern angle of the new citadel on Spike Island, until you arrive at the third white buoy; then keep more to the north-eastward, and take a position, in from 12 to 7 fathoms. The buoys will be your best guide, observing to keep to the eastward of all the white buoys, and to the westward of the black buoys. Merchant-ships may ride off Cove, in smoother water and less tide: they may also go farther up the harbour of Passage, and ride anywhere between the first houses and Marino Point.\*

In proceeding from Cove to Passage, keep over towards Haulbowling Island, to avoid a *spit of rocky stones*, with only 12 feet on it, which runs off from White Point nearly  $1\frac{1}{2}$  cable's length, and on which a black buoy is now placed. In rounding the White and Black Points, give them a berth of a cable's length; and when to the westward of the Black Point, give the eastern or starboard shore a berth of  $1\frac{1}{2}$  cable's length, to avoid the *sand* and *Shawmore Rocks*, which extend from that shore, and dry at low water. You may go westward from Haulbowling Island, until you see Rennan's Point in the channel of Passage: then steer northward, along the west side of the channel, for the anchorage. Vessels drawing only 10 or 11 feet may, with spring-tides, go up to the Black Rock, or the town of Cork. From Passage to Cork the distance is 5 miles. Above Passage a pilot is absolutely necessary.

In a small creek, called CROSS HAVEN, within the entrance of Cork Harbour, and on the west side, opposite to Dog's Nose, vessels may ride in 8 or 12 feet, and have good shelter. The channel round the point, going in, is very crooked; the best way is to keep in the ripple of the tide, which is mostly visible, or go in a little before high water, when vessels drawing 10 or 12 feet water will go over all the dangers.

DANT, or DAUNT ROCK, lies about  $\frac{3}{4}$  of a mile S.S.E.  $\frac{1}{2}$  E. from the extremity of Robert Head (on which is a signal tower), and S.W.  $\frac{1}{4}$  W.,  $4\frac{1}{2}$  miles from Roche lighthouse. It is distinguished by a buoy, painted black, with a white head, and the words "*Daunt Rock*" on it. As this rock lies nearly in the fairway of vessels passing between Cork and Kinsale, it must be carefully avoided. Cuskhenny House, in Cork Harbour, kept in sight to the eastward of the point of land under Fort Camden, leads to the eastward of it. The Great Sovereign Islet, touching Flat Head, leads midway

\* Telegraphs and a code of signals for Cork Harbour have been established, by which information may be conveyed 30 miles in 5 minutes; so that as soon as a vessel, homeward bound or otherwise, shall appear within several leagues of the harbour, it will be almost immediately known in the city.

between the rock and Robert Head. By keeping Robert Head tower in a line with the extremity of Robert Head, you will pass about  $\frac{1}{4}$  of a mile to the southward of it.

**OYSTER HAVEN.**—About 2 miles to the eastward of the entrance of Kinsale Harbour is a creek, in which small vessels may find shelter, in 9 feet at low water. On entering this haven, it must be noticed that a *shoal* runs from Keneda Point, the east point of the harbour, nearly  $\frac{1}{2}$  a cable's length without high-water mark, therefore give it a berth. The best place for anchoring is on the west side, in the mouth of that branch which runs to the westward.

Captain M. White says, "This haven, though it presents an inviting entrance, is merely a creek or inlet of the sea, and will not afford any shelter with the wind from between the south and west to vessels drawing 8 feet water, and these must occasionally lie aground. Winds in the above direction send in so heavy a sea, as to render riding in the harbour's mouth actually impracticable."

**KINSALE HARBOUR**, though narrow at the entrance, and all the way up to the town, is a very safe harbour for all ships. In sailing towards it from the southward, keep Knockmedown Hill N.E. by E., until you see the Old Head of Kinsale, upon which are two white towers: the southern one, 42 feet high, is a lighthouse exhibiting a fixed light, 294 feet above the level of high water, visible from all points seaward, between N.E. and N.W., more than 7 leagues off. After making that, which is about  $4\frac{1}{2}$  miles S.W. by S. from the entrance of the harbour, run in, until the lighthouse on it bears W.N.W., about 3 miles; then run in N.W. by W., until the lighthouse bears S.W. by S., and then steer N.E. by N., until you are abreast of the lower cove, where you may anchor, in 6 fathoms.

The dangers on entering the Harbour of Kinsale are *Bulman Rock* on the starboard side, and *Farmer Ledge* on the port or larboard. The former lies a little more than a cable's length S.S.W.  $\frac{1}{2}$  W. from Hangman's Point, on the east side of the entrance, and has 3 feet on it at low water. You may pass this rock on either side; but the channel on its west side is the broadest, and most safe for ships coming in or going out. When going in, after passing this rock to the westward, keep in towards the eastern shore, until you are up to the bar. To go between the rock and Hangman's Point, keep Sovereign's Isles a boat's length open of Froward Point. To avoid it on the south side, keep *Oyster Haven Rock* open of the same point; and to keep clear of it when going in on the west side, keep Charles's Fort in sight, or open of Hangman's Point; and by not bringing that fort within its own apparent breadth of Money Point, you will avoid the Farmer.

On Charles's Fort a fixed light is exhibited during the night; it is 98 feet above the sea, open to the harbour in a N.E. by N. bearing, and may be seen, in clear weather, 6 miles off.

There is a *bar* a little to the southward of Charles's Fort, of only 10 feet at low water, spring-tides. Therefore, ships that arrive at low water, and draw more than 11 feet, must stop an hour or two, until the water rises a little, before they proceed. You are over the bar, and in deep water, when going up, with Charles's Fort bearing E.S.E.  $\frac{1}{2}$  E.

The common anchorage is off Cove, a little more than a cable's length from shore, in 4 or 5 fathoms. But there is water enough for the largest ships to anchor above Cove, anywhere in the channel of the river, which lies close along the eastern shore, and is not above a cable's length wide until you get near to the town of Kinsale, where the channel is broader.

To go into Kinsale Harbour in the night, keep the light on the Old Head S.W. by S., and the light in Charles's Fort N.N.E.; or when the Old Head light is right astern, keep the light in Charles's Fort on your port or larboard bow. But as these lights are the only guide, it will be prudent to keep an offing until day-light, or till a pilot can be obtained.

**COURTMACSHERRY BAY.**—From the Old Head of Kinsale, the bearing and distance to the Seven Heads are W.  $\frac{1}{2}$  N., about 7 miles. Between these is Courtmacsherry Bay, in the north-western part of which is Courtmacsherry Harbour.

In Courtmacsherry Harbour small vessels may lie very safe near the quay, in 2 fathoms. As the water is shoal off the point next the quay, vessels drawing 8 or 9

feet must have half-flood to go in. About  $\frac{1}{2}$  of a mile east of this place, in a small bight, formed by a perpendicular clay cliff, a vessel may stop in  $1\frac{1}{2}$  or 2 fathoms water; but as the channel is narrow and the tide rapid, one anchor must lie on the shore. The channel, from the extremity of Courtmacsherry Point to these anchorage, is not above  $\frac{1}{2}$  of a cable's length from shore.

THE BARRELS are two rocks, which lie near the middle of Courtmacsherry Bay. The southernmost is small, and dries; the other is larger, lies about  $\frac{1}{2}$  a mile to the northward of the former, and is very seldom seen above water. At the southernmost Barrel Rock, the extremity of the Old Head of Kinsale bears S.E. by E.; and the Horse Rock, which is always above water, W. by N. To avoid the Barrel Rocks on the west side, keep within  $\frac{1}{2}$  of a mile of the shore, on the west side of the bay. The water, within a ship's length of the Horse Rock, is deep all round. Vessels may anchor, with westerly winds, on the west side of Courtmacsherry Bay, either off the officers' houses, S.W. from the Horse Rock, in 8 or 10 fathoms, or to the northward of the rock, in 4 or 5 fathoms.

CLONEKILTY HARBOUR is about 7 miles to the westward of Courtmacsherry Bay, being fit for small vessels only; and the going either in or out when the wind is southerly, is very dangerous. There are but 2 feet on the bar at low spring-tides; and none ought to run for the harbour in blowing weather, unless under great necessity, and with  $\frac{1}{2}$  flood. The entrance is on the east side of the island, and the channel lies near the main. On the north side of Ring Point is a rock, which extends to the edge of the channel. You should anchor near the main, opposite the east end of the island, in the bight next above the narrow, or on the north side of the island. The other channel along Mucker is only fit for boats. In the middle of Clonekilty Bay, about a mile southward of Ring Point, a vessel may stop, with the wind off shore, in 9 or 10 fathoms.

About  $\frac{1}{2}$  a mile to the westward of Dundedy Head, otherwise Galley Head, lies *Duly Rock*, which dries at about half-ebb. A cluster of rocks, called the *Robares*, lie S. by W., distant  $2\frac{1}{2}$  miles from Dundedy Head, and west, 8 miles, from the Seven Heads; they are under water, but we are uncertain whether they are dangerous.

ROSS HARBOUR, &c.—About  $3\frac{1}{2}$  miles N. by W.  $\frac{1}{2}$  W. from Dundedy Head, is Ross Harbour, a small creek, which sometimes affords shelter to small vessels, but only in very moderate weather, with off-shore winds. The entrance is dry at low water, and is rough and dangerous at high water, when the wind is on the shore. There are 10 feet on the bar at high water, spring-tides, and 8 feet with neap-tides. With off-shore winds and moderate weather, vessels may anchor on the west side of Dundedy Head, between it and Ross Harbour, and also several miles to the westward of Ross, on clear ground, about  $\frac{1}{2}$  a mile or a mile from shore.

GLANDORE HARBOUR.—About 4 miles to the westward of Ross Harbour is Glandore Harbour; and about a mile to the northward of the harbour's mouth, and nearly in the middle of the channel, are four small rocks, called the *Dangers*. The southernmost of them is dry at half-ebb, and the northernmost appears at 4 hours' ebb. On each side of these rocks is a channel, sufficiently deep for large ships. That on the west side is reckoned the best, because there is a mark to lead through it, which is the east extremity of the little island next to the Dangers, on with the west extremity of Adam's Isle. These points, kept a very little open of each other, will lead you on the northernmost of the Dangers. In proceeding along the east side of these rocks, keep about  $\frac{1}{2}$  a cable's length from the shore.

Near the head of this harbour vessels may lie very safely, off Ballincalla, although there are but 4 or 5 feet at low water, spring-tides; soft ooze prevents their receiving damage. About high water, neap-tides, ships of 12 feet water may run up a cable's length or two above the house of Ballincalla, and lie there safely, on soft mud.

CASTLEHAVEN HARBOUR is fit for vessels drawing not more than 14 feet water. These must lie about  $\frac{1}{2}$  of a mile above Reen Head, with the Stags of Castlehaven in sight between Horse Island and the main. When the wind does not blow hard from the S. or S.E., vessels may ride in the bay, off the town of Castlehaven, in 4 or 5 fathoms; and it gradually shoals to 2 fathoms, or less, as you proceed up the harbour. Between Adam's Isle and Shillennragga Head is a *sunken rock*, on which are 12 feet at low water, spring-tides: this rock lies rather nearer the island than the head.



To avoid it, keep  $\frac{1}{2}$  of the distance between the head and island from the head, or  $\frac{1}{4}$  of that distance from the island.

*Carrihananim Rock* lies between Ragged Island and Squince Island, but nearer to the latter: it is covered, excepting at very low spring-ebbs. To avoid this rock on the south side, keep the westernmost of the Black Rocks, which lie about  $\frac{1}{2}$  a mile W.N.W. from Ragged Island, on with Toe Head. About a cable's length S.W.  $\frac{1}{2}$  W. from the westernmost Black Rock lies a small rock, which is dry at about half-ebb.

The Stag Rocks lie W.  $\frac{1}{2}$  N., 12 miles from Gally Head;  $3\frac{1}{2}$  miles S.W. by W. from the entrance of Castlehaven Harbour; and 9 miles E.S.E.  $\frac{1}{2}$  E. from Cape Clear lighthouse. There is a very good and safe passage between these rocks and Toe Head, keeping rather nearer to the Stags than to the land, in which there are not less than 21 fathoms water. Ships may anchor in the bay, on the east side of Toe Head, or in the bay on the west side of Toe Head, or in Barlog Bay, about  $\frac{1}{2}$  a mile from the shore.

**BALTIMORE HARBOUR** lies about  $5\frac{1}{2}$  miles to the north-eastward of Cape Clear, and is very convenient for ships bound either eastward or westward. The entrance lies between Baltimore Point on the eastern side, and Sherkin Island, or Fort Point, on the western. These points being high and nearly perpendicular, and the land within being also elevated, and presenting nearly the same aspect to an observer in the offing, the mouth of the harbour is not easily made out at any considerable distance. There are, however, the remains of a small stone beacon upon the eastern point; and a ruined house, or fort, appears on the summit of the western point, which serve to mark the entrance. The Fasnet Rock, kept in sight to the eastward of the S.E. end of Cape Clear Island, will lead you within  $\frac{1}{2}$  a mile of the entrance. Small vessels may ride 2 or 3 cables' length to the N.N.W. of Baltimore town, in 10 or 11 feet at low water, quite sheltered from all winds. Large ships must lie off the old castle on Sherkin Island, in 3 or 4 fathoms, where the harbour's mouth is open.

The rocks in this harbour are the *Loo*, the *Perch*, and two small ledges of *sunken rocks* on the western side, under Sherkin Island. The Loo Rock lies about  $\frac{1}{2}$  a cable's length N.W.  $\frac{1}{2}$  N. from the high cliff, with the turret on the east side: it is dry at 4 hours' ebb, and may be avoided by keeping in mid-channel. The Perch Rock appears at half-ebb, lies nearly N.N.E.  $\frac{1}{2}$  E. from the turret on the cliff, and is known by a perch which is fixed on it. This rock has shoal water on every side,  $\frac{1}{2}$  a cable's length from the Perch.

To enter this harbour, for which you must have a leading wind, steer boldly in N.N.E.  $\frac{1}{2}$  E., keeping  $\frac{1}{2}$  of the whole distance across nearer to the western than to the eastern point, until the ruined abbey, which stands in a small bight on Sherkin Island, bears N.W. by W.  $\frac{1}{2}$  W; then anchor, in as nearly mid-channel as circumstances will permit. By keeping  $\frac{1}{2}$  nearer the western than to the eastern land, you pass to the westward of the Loo; and when Baltimore New Church appears in sight over the sandy beach on the starboard hand going in, you will be considerably to the northward of, or within that rock. There is always a ground-swell in this harbour when the wind prevails between W. by N. and S.E., which increases very considerably in boisterous weather. It is high water, full and change, at 4h. 10m. The flood sets right in through the entrance, and the ebb as directly out. The watering-place is at Baltimore town.

In the entrance of Baltimore Harbour are from 12 to 14 fathoms; between it and Cape Clear are from 18 to 34 fathoms, clear sandy ground, and clear of rocks; and about 2 leagues from the land are 50 fathoms. The space between Cape Clear, Long Island, Crook Haven, and the Fasnet, is perfectly free from danger, though in boisterous weather the sea breaks in some places violently, caused by the rough elevations of the ground.

When coming in from sea towards the land, neither Long Island nor Goat Island can, in the first instance, be clearly discerned, owing to their proximity to the main land, with which indeed they appear to be identified. If you keep Fasnet Rock S.S.W.  $\frac{1}{2}$  W., or Leamcon high tower N.N.E.  $\frac{1}{2}$  E., will lead directly to Goat Island; and as you proceed, will open the passage eastward and westward thereof. Mount Gabriel, in one with Leamcon Tower and Castle, bearing E.N.E.  $\frac{1}{2}$  E., will open the western avenues; and the south-western end of Cape Clear Island, kept just open of the S.W. end of the Western Calf Island, bearing S.W. by S., will lead you to the S.E. passage between Long Island and Three Castle Island, and to the entrance of Scull Harbour.

**LONG ISLAND SOUND** is well sheltered, of easy access, and capable of receiving large ships, which may enter at either end of the island, and anchor anywhere on good ground; but be careful to avoid a *spit of sand* which runs off about  $\frac{1}{2}$  a mile within the east end of the island, and extends northward more than half over the channel. The least water on it is 3 feet. In entering this harbour at the west end of Long Island, you need only to give the N.W. point, opposite Goat Island, a berth of about  $\frac{1}{2}$  a cable's length.

The three principal passages into Long Island Sound are, one from the south-westward, between Goat Island and the Black Rock; one between Goat Island and Long Island; and the eastern passage between Long Island and Three Castle Island, which may be taken without a pilot.

**THE S.E. PASSAGE.**—Coming from the westward and intending to enter the Sound by this passage, run along the southern side of Long Island, giving the shore a berth of rather more than  $\frac{1}{2}$  of a mile. By keeping thus near to the latter island, you will avoid a *dangerous rocky ledge*, which projects in a south-westerly direction from Three Castle Island, extending thence nearly  $\frac{1}{2}$  of the channel across, and having only 12 feet over it at low water. The southern mark for this shoal is the S.W. end of the Western Calf in one with the S.W. extremity of Cape Clear Island. Having rounded the eastern point of Long Island, you must, if in a large vessel, anchor as soon as Cape Clear light-house comes in one with the said point, taking care also not to shut in the tower of Brow Head with the southern side of Gun Point and Coney Island, in order to avoid the spit of sand before described, which projects from Long Island, and which, partially drying, divides the eastern from the western anchorage; and also to avoid a *rock* which lies in the mouth of the Scull Harbour.

**THE S.W. PASSAGE.**—When entering by this passage, you have merely to keep in mid-channel, and preserve that precaution all the way through, as well as from thence to the anchorage.

When entering the passage between Goat Island and Long Island, it is necessary to keep  $\frac{1}{2}$  nearer the former than the latter, until you have passed the *rocky ledge* which runs out in a north-westerly direction from Long Island. You will be to the northward of this ledge, when Coghlan's tower, at Crookhaven, appears in one with the northern side of the high wedge-shaped rocks, called the Green Islands: you must then proceed in mid-channel, until you reach the anchorage. The ground is everywhere a soft cohesive mud, and the depth varies from 2 to 7 fathoms. It is high water, full and change, at 4 o'clock; and the greatest vertical rise and fall of water in the Sound, after a series of moderate weather, is 12 feet.

A very *dangerous sunken rock*, on which there are only 10 feet water, lies about  $\frac{1}{2}$  a mile W.  $\frac{1}{2}$  N. from the Black Rock. In boisterous weather the sea breaks tremendously upon this rock, as well as on the rocky heads in its vicinity. By keeping the Mizen Peak in one with Alderman Head, or by keeping Three Castle Island in sight to the southward of Goat Island, you will pass considerably to the southward of it.

Scull Harbour lies to the N.N.E. of Cape Clear Island, distant 6 miles. It is pretty well sheltered, the ground good, and the water in the anchorage from 2 to  $3\frac{1}{2}$  fathoms. There is only one rock to be avoided, which lies in the middle of the entry, and is dry at 2 hours' ebb. The mark for this rock is, the western end of the Western Calf in one with the eastern end of Long Island; and when the southern bluff of Brow Head begins to shut in with Gun Point, you are very near its southern edge.

Scull Harbour is not so good an anchorage as Long Island Sound, being more exposed to the swell raised by south-westerly winds; and the ground is not so good. The best time to enter is at or after half-flood, as the rock in the entrance is then above water.

**TIDES.**—The tide between Waterford and Youghall flows until 5 o'clock; but the stream in the offing continues to run 3 hours longer. The principal stream of flood sets in from the westward. The tides on the coast, and in the harbours between Youghall and Gally Head, flow until near 5 o'clock; the stream continues to run 3 hours after. Spring-tides rise 11 feet, and neap-tides 6. The flood sets in from the westward, and the ebb from the eastward. Within 3 miles from the shore, the strongest spring-tides run from 3 to 4 miles an hour. The tides on the coast, and in the harbours between Gally Head and Cape Clear, flow, on the change and full days, until about 4 o'clock.

but the stream of flood continues to run to the eastward, in the offing, for 3 hours longer; and the ebb from that time runs to the westward for 6 hours, or until it is half-flood on the shore. The spring-tides rise 11 feet, and the neap-tides 6 or 7 feet.

## FROM CAPE CLEAR TO THE RIVER SHANNON.

**CAPE CLEAR**, according to the Admiralty Surveyors, is in latitude  $51^{\circ} 24' 56''$  north, and longitude  $9^{\circ} 29'$  west. It is the southernmost promontory of Ireland, taking its name from the island of which it is a part. It bears from the Longships lighthouse about N.W. by N., and is distant from it 54 leagues.

A lighthouse is erected on the S.E. side of Cape Clear Island, in which is exhibited, from sun-set to sun-rise, a revolving bright light, which attains its greatest brilliancy once in every 2 minutes. The tower is white, 42 feet in height from its base, but elevated 455 feet above the level of high water, and visible from all points more than 8 leagues off.

Captain Martin White, R.N., says, "The hidden dangers near the Irish coast, north-westward of Cape Clear, are, comparatively speaking, few; those principally to be feared are as follow:—the breaker off Three Castle Head, the Crow Rock, the south-western tail of the Great Skellig, the eastern projection of the Lemon, and the different sunken rocks among the Blasketts. The other rocks in this quarter, as well indeed as the shore itself, are steep and bold close to."

On the north side of Cape Clear Island, above a mile from shore, vessels may anchor in moderate weather. There is a passage between Cape Clear Island and the Sherkin Islands, called Gaskinaan Sound, and derives its name from two rocks which lie nearly in the middle, having a channel on each side of them; but no stranger should attempt this passage under any circumstances, unless during day-light; even then it may be considered dangerous. Those only who are well acquainted should attempt it; therefore, if caught with a gale of wind from the southward, between Cape Clear and the Stags, a knowledge of Baltimore Harbour becomes of the greatest importance.

*Fasnet Rock* lies nearly 5 miles W.  $\frac{1}{2}$  S. from Cape Clear lighthouse, and rises 98 feet above the level of the sea. The bottom westward, southward, and north-eastward of the Fasnet is both shoal and rocky, particularly to the north-eastward. In this latter direction there is a *flat rock*, at the distance of  $\frac{1}{4}$  of a mile from the Fasnet, having only 9 feet over it at low water. The long eastern mark for it is Baltimore Tower appearing in one with the highest part of the Black Rock, which forms the south-western end of Cape Clear Island; therefore, when navigating near the Fasnet, do not approach it nearer than a mile. The Mizen Peak on with Brow Signal Tower, leads through midway nearly between the Fasnet and the Cape. The Peak, if kept open to the westward of Brow Head, will lead you  $\frac{1}{2}$  a mile to the south-westward of the Fasnet. These marks may be very useful in the event of a partial fog, to which this part of the coast is very much subject. Between the rock and Cape Clear are from 12 to 35 fathoms. Close to the former there are 12, and to the latter 24 fathoms.

**CROOK HAVEN** entrance lies  $8\frac{1}{2}$  miles N.W.  $\frac{1}{2}$  N. from Cape Clear. The harbour is narrow but well sheltered, and convenient for vessels bound eastward. The ground is good, and the water sufficiently deep for large ships. Off the point, on the south side of the entrance, lie some *rocks*. To avoid them, keep the summit of Baldivan Hill between two points of land on the north side of the entrance; or rather on with the easternmost of the two, until you open the haven, which lies nearly east and west. The best anchorage is opposite the houses on the south side, and about  $1\frac{1}{2}$  mile from the entrance. Ships drawing above 16 feet may anchor about  $\frac{1}{2}$  a mile up from the mouth of the harbour, in 4 fathoms. As there cannot be any sea in the haven but with easterly winds, it will be, therefore, proper for ships that do not go above the peninsula, to moor N.N.E. and S.S.W., that they may, when the wind is easterly, ride by both anchors. The north anchor should lie either on the shore or very near it. *The ground all over the harbour is soft mud; and vessels that lie above the houses of*

Crook Haven, may take the ground about half-ebb, without the risk of damage. Pilots are always ready, and will come off in any weather, when signalled. Southward of Crook Haven ships may anchor, in from 20 to 30 fathoms.

A lighthouse is erected on Rock Island Point, at the northern side of the entrance to Crookhaven, from which a white fixed light was first shown on the 1st of August, 1843, and will be continued every night from sun-set to sun-rise. The lantern is open to seaward and to the haven, from E. by S. to W. by N., and is elevated 67 feet above the level of the sea, and bears from Cape Clear lighthouse N.W.  $\frac{1}{2}$  N.,  $8\frac{1}{2}$  miles; from Cape Clear Island (S.W. end) N.N.W.  $\frac{1}{2}$  W., 8 miles; from Alderman Rocks (outer point) N.W.  $\frac{1}{2}$  N.,  $\frac{1}{2}$  a mile; and from Fasnet Rock N.  $\frac{1}{2}$  E., distant 6 miles.

**DIRECTIONS.**—When running from the offing for Crookhaven, the opening to which cannot be made out till very near the Alderman Head, steer in from the Fasnet Rock north, keeping the latter rock due south as near as may be, until Mizzen Peak comes on with Alderman Head. In proceeding thus, you cannot be deceived, because at the time, or nearly so, Mount Gabriel will appear in one with Leamcon signal-tower and castle to the north-eastward; and the Brow Head, with its signal-tower, will appear to close in with the Alderman Head to the westward. The harbour will now begin to unfold itself. The revenue officers' houses, on the northern shore, will be seen, and ultimately, Cohgan's Tower, on the south side. The new lighthouse will also point out the northern side of the entrance.

When you have fairly opened the harbour, run right in, keeping directly in mid-channel. The signal-tower on Brow Head three times its own apparent breadth open to the northward of O'Driscoll's house (a remarkable white house on the eastern part of the peninsula, and standing by itself), bearing west, will lead you to the northward of the Alderman Rock, and into the fairway.

A vessel cannot enter Crook Haven unless the wind is to the southward and eastward of S.S.W. by compass, or to the eastward and northward of N. by W.; but when it is foul for Crook Haven, it will be fair for Long Island Sound. You may anchor, with northerly and westerly winds, a mile to the north-eastward of the Alderman Rock, in very good ground, taking care to provide against a southerly wind.

*Alderman Rock*, part of which is always above water, lies off Alderman's Head, on the southern side of the entrance, and is of some considerable extent.

*Granny Rock*, the only one within the harbour, lies off Granny Island, and shows at low water, great spring-tides. The long eastern mark for this rock is Leamcon Tower just open to the southward of the bluff point of Rock Island. Vessels, therefore, of any burthen, in the event of loss of anchors, may boldly run quite up the haven, until they take the ground, by keeping in mid-channel.

Brow Head lies 3 miles to the westward of Alderman Head, and the coast is mostly steep-to, having from 15 to 20 fathoms within  $\frac{1}{4}$  of a mile. But there are some *sunken rocks* to the westward of Brow Head, as well as to the south-eastward of Mizzen Head. You will clear these rocks to the southward, by keeping Leamcon Tower in one with, or open of Alderman's Head, until Three Castle Point appears open to the westward of Mizzen Head.

Barley Cove is a small inlet, between Brow Head and Mizzen Head, which, when viewed from the offing, has the appearance of a good harbour. There is, however, no safety in it with any wind, particularly from the westward. There is a *rock* directly in the centre of it, which shows occasionally, as well as some others in the vicinity; but the western shore, close to Mizzen land, is pretty clear.

**MIZEN HEAD** lies about 12 miles N.W.  $\frac{1}{2}$  W. from Cape Clear, and Three Castle Head  $2\frac{1}{2}$  miles north from Mizzen Head. This head is rendered remarkable by a castle on it, with three towers. Sheep's Head lies N.N.E.  $\frac{1}{2}$  E.,  $3\frac{1}{2}$  miles from Three Castle Head. The two heads, last mentioned, form the entrance of Dunmanus Bay. About  $2\frac{1}{2}$  miles S.S.W.  $\frac{1}{2}$  W. from Mizzen Head, lies a *patch of foul ground*, called the *Mizzen Rock*, with 29 fathoms on it; and  $5\frac{1}{2}$  miles S. by W.  $\frac{1}{2}$  W. from Mizzen Head is another *rocky patch*, with 27 fathoms over it, called *Will Shehey's Rock*. Between this and the former are 40 fathoms, and between the former and the shore 32 fathoms.

**THREE CASTLE HEAD.**—About  $\frac{1}{2}$  a mile W.  $\frac{1}{2}$  S. from Three Castle Head, lies a *sunken rock*, with only 20 feet water on it at low water, spring-tides. Here the sea, in boisterous weather, breaks very heavily. By keeping Hungry Hill ever so little open

to the westward of the pitch of Sheep's Head, you will pass considerably to the westward of it; and by opening out Bird Island (a great rock in Dunmanus Bay) three times its own apparent breadth northward of Three Castle Head, you will pass close to the westward of it. The south side of Bird Island touching Three Castle Head, is the mark for the centre of the rock. There are several other *rocky heads* between this breaker and the land, with different depths of water over them; therefore, it is not safe to pass between either.

**DUNMANUS BAY** has deep water and clean ground, nearly as far up as Manin Island, at the head of it; but is quite exposed to westerly winds, and little frequented, except by small vessels that can ride in Dunmanus Creek, or above Manin Island. In Dunmanus Creek you should anchor nearest the west side, in 3 or 4 fathoms. At Manin Island, anchor at about a cable's length E.S.E.  $\frac{1}{2}$  E. from the Island, in 9 feet at low water, on soft mud. In summer, large ships may ride on good ground anywhere above Carberry Island, especially on the south side, near Casilean Hill.

About  $\frac{1}{4}$  of a mile N.W. by W.  $\frac{1}{2}$  W. from the N.W. point of Carberry Island, is a *rocky shoal*, of 8 feet water, very narrow from north to south, and generally discernible by the swell of the sea, which, in strong westerly winds, breaks violently. The top of Casilean Hill on with the N.W. point of Carberry Island, will carry you to the northward of it; and the three hummocks on with the middle of Carberry Island, will take you to the southward of it. Another *shoal* extends from the small island to the eastward of Carberry, above half-way to Carberry Island. On this shoal are 5 or 6 feet at low water. On the north side of Four-mile Water Creek is *Carrignaronky Rock*, dry at low water. Between Furze Island and Horse Island is a *rocky ledge*, extending almost over, and covered about an hour before high water. *Sugach* is a *rock*, about a cable's length from the shore, below Dunkelly Houses, on which are but 6 feet at low water, spring-tides.

**BANTRY BAY** lies to the northward of Dunmanus Bay, between Sheep's Head and Bear Island. It is large, safe, and commodious for ships of any size. The stream of tide is scarcely sensible in any part of it. The water is sufficiently deep almost close to both the shores; and there are no rocks or shoals in the way but such as may be easily avoided, even in the night. Ships may stop anywhere in the middle of the bay, on good ground, or, in most parts, near to either side.

**HUNGERY HILL**, on the north side of the bay, is a conspicuous land-mark, having a pyramid at the top, 2160 feet above the sea. At the bottom of the bay are two anchorages, one on the south and the other on the north side. That on the south shore is within Whiddy Island, to the northward of Bantry town, commonly called Bantry Harbour. The westernmost entrance is not more than a cable's length wide, and the shore is steep-to on both sides. In the narrowest part are 3 fathoms, and farther in from 5 to 6 fathoms. Along the east side of Whiddy Island are five small islands. The best anchorage is to the northward of the four southernmost ones, in 5 to 6 fathoms, quite land-locked. The best passage is to the northward of Whiddy Island, and round the east end of it.

Vessels entering Bantry Harbour are cautioned not to anchor nearer the town of Bantry than where the flag-staff, in front of Bantry House, bears S. by W.  $\frac{1}{2}$  W., and the centre battery on Widdy Island N.  $\frac{1}{2}$  W. This precaution is absolutely necessary, as the inner section of the harbour has become extremely dangerous, by allowing vessels to throw their ballast overboard. At low water, spring-tides, there are only 9 feet water over the outer shoal, which lies with the flag-staff in front of Bantry House W.S.W., and the centre battery on Widdy Island N. by W.  $\frac{1}{2}$  W.; but there are several others between this and the town of Bantry.

**GLENGARIFF HARBOUR** is on the north side of Bantry Bay, opposite to Whiddy Island. It is small, and the entrance narrow. Without the harbour is an island, on the east side of which is the passage in. Abreast of the island, the passage is  $\frac{1}{4}$  of a mile wide, and has 6 fathoms. To go in here, keep near the east shore, in order to avoid some *rocks* which lie off the island. When past this island, anchor off the town, in from 3 to 5 fathoms. This place is very small, and the ground indifferant. It is seldom used by any but coasters. In summer the largest ships may ride without the island, at the mouth of the harbour, in 7 or 8 fathoms, good holding ground.

**BEAR HAVEN** is a good harbour, large and well sheltered, and good ground. The water is sufficiently deep for the largest ships. It has two entrances, one at the

east end of Bear Island, and the other on the west end. The western entrance is the most convenient for ships from the westward, but the other is safest for strangers. There is a signal-tower standing on the westernmost elevation of Bear Island, which serves to mark out this entrance. You may anchor anywhere on the north side of the island, in from 5 to 11 fathoms; but off Ballinakely is the best place. Ships that wait for a wind, will find the west end of the harbour most convenient. In the west entrance, which is only 150 fathoms wide, are two *rocks*, one on the eastern side, projecting about  $\frac{1}{2}$  a cable's length from the island, and another on the western side of Dunbui, called the *Colt*. It appears at 4 hours' ebb. On the former there are never less than 4 feet water. There is also a *bed of sunken rocks* lying nearly in a fairway of the passage to the southward of the Colt, stretching off from the western shore 2 cables' length, with from 10 to 15 feet on them at low water, the mark for which is the pyramid on Hungry Hill nearly in one with the fort which stands on the N.W. end of Bear Island. In order to avoid all these rocks, steer as nearly in mid-channel as possible, as no uninterrupted leading-mark can be given, borrowing somewhat nearer to Bear Island as you close with the latter rocks, and again hauling into mid-channel as soon after passing them. Care must also be taken to avoid a *rocky ledge*, of 13 feet, which runs nearly  $\frac{1}{4}$  of a mile S.S.E. from Ianish Island. There are also some *rocks* off the northern point of Bear Island.

POLEEN COVE is described by Captain White as a small contracted inlet of the sea, formed by cliffs, completely perpendicular, and lying 2 miles to the westward of the western entrance into Bear Haven, with from 2 to 7 fathoms water, ground wholly sand. It is, however, seldom or ever frequented by vessels larger than Irish Hookers, and it scarcely affords either shelter or convenience to them.

When attempting the western entrance into Bear Haven, some precaution is necessary, as the little inlet of Poleen, when viewed from the south-westward, puts on nearly the same appearance as the entrance, and may possibly be mistaken for it by a stranger. In order to guard against this, bear in mind that the pitch on Mizen Head nearly shut in with that of Three Castle Point, is the mark for pointing out the western entrance to Bear Haven; but, from the entrance to Poleen, Mizen Head will appear considerably open to the westward of Three Castle Point. There is also a signal-tower on the westernmost height of Bear Island, and not far from the entrance, which serves more fully to mark out its situation.

Going in at the east end of the island, the *Caranamadry Rocks* are the greatest danger, the easternmost of which lies about  $\frac{1}{2}$  a mile south-eastward from the east point of the island, and is never quite covered but at high water, spring-tides. These rocks are avoided by keeping nearer to the little island Roanharrick than to the point of Bear Island.

There is no passage between these rocks and Bear Island for any but very small vessels. The channel between Caranamadry Rocks and Roanharrick Island is  $\frac{1}{4}$  of a mile wide, and has from 7 to 17 fathoms water in it. Vessels may therefore turn through it without difficulty, having always in view the set of the tides. When rounding the breakers which these rocks occasion, give them a berth of about  $\frac{1}{4}$  of a mile, or borrow within that distance of Roanharrick Island; and then haul to the westward, into the haven, giving the east end of Bear Island a fair berth in passing, and anchor in mid-channel, in from 6 to 10 fathoms.

If necessary to pass between Roanharrick Island and the little island lying  $\frac{1}{4}$  of a mile northward of it, keep nearer to the former, to avoid the foul ground, which runs off from the south side of the latter, nearly half-channel across.

*Ducalla Rock* lies nearly a mile E.S.E.  $\frac{1}{2}$  E. from Roanharrick Island, and is dry about low water. To avoid this rock on the south side, keep the point of Rimore on with the sharpest topped distant hill eastward of the head of the bay.

Bear Haven, by its proximity to the sea, and situation on the western coast of Ireland, at 5 leagues from Bantry, must be esteemed an excellent rendezvous for a fleet, it having two entrances, great space, and a moderate depth of water, on good holding ground. It is easy of access, and well sheltered from all winds, and in a country abounding with many necessary refreshments.

Its western entrance, being narrow between the steep cliffs, ought only to be attempted with a leading wind; but ships may, at all times, work into or out of the eastern channel.

**TIDES.**—The tides on this part of the coast flow until  $\frac{3}{4}$  past 3 o'clock, and the stream of flood continues to run along Mizen Head for 2 hours later. The flood tide sets from the N.W. along the coast, and the ebb from the S.E. In the offing, about a league from the shore, the strongest spring-tides do not run above  $1\frac{1}{2}$  mile in an hour. Within a mile of Mizen Head, the tide of ebb, or western stream, runs  $3\frac{1}{2}$  miles in an hour, and commonly makes a rough sea there.

The tides flow, on the full and change days of the moon, in the following harbours, nearly as follows:—At Valentia Island, 3h. 35m.; Bear Haven, 3h. 45m.; Crook Haven and Long Island Sound, 4h. 0m.; Baltimore Harbour, 4h. 10m.; Kinsale 4h. 30m.; Cove at Cork, 5h. 3m.; Youghall 5h. 0m.; and Dunmore Harbour, Waterford, 5h. 18m. Spring-tides rise at Valentia Harbour 12 feet, neap-tides 7 feet: at Crook Haven and Long Island Sound, spring-tides rise 12 feet, neaps-tides 7 feet; at Baltimore, spring-tides rise 11 feet, neap-tides 6 feet; at Kinsale, spring-tides rise 12 feet, neap-tides 7 feet; at the Cove at Cork, mean spring-tides rise 11 feet 10 inches, neap-tides 9 feet 9 inches; at Youghall Harbour, spring-tides rise 12 feet, neap-tides 7 feet; and at Dunmore Harbour, Waterford entrance, spring-tides rise 13 feet, neap-tides 8 feet, though much depends on the direction of the wind. Southerly winds cause the tides to rise 1 or 2 feet higher, and northerly winds will equally depress them.

*Remarks on the soundings, when approaching the S.W. coast of Ireland, by Captain White, R.N.*—"The soundings on a supposed radius of  $5\frac{1}{2}$  leagues from Mizen Head, in any direction between west (true) or N.W. by W.  $\frac{1}{2}$  W. and south (true) or S.S.W.  $\frac{1}{2}$  W., do not materially differ as to depth or quality of ground. The former varies only from 60 to 62 fathoms, and is principally of an oazy nature. Nearer to Mizen and Brow Heads, the ground partakes of more variation in quality as well as depth; and there are several *sunken rocks*, in elevated patches of rough ground, in their vicinity, the principal of which are *Mizen Rock*, and a *patch*, called *William Sheehy's Rocks*. There are 27 fathoms upon each of these rocks, and 40 fathoms all round and between them. They are consequently not dangerous, otherwise than by the ebullition they occasion in bad weather.

"When running in from the Western Ocean, for the purpose of rounding Cape Clear, the quality of the ground is of much greater consequence than that of the depth; for, so long as the ingredients brought up by the lead remain free from oazy matter, you cannot be nearer than 6 leagues to any part of the Irish coast between the Skelligs and Brow Head, let the depth be what it may; but you may be considerably farther from it. On the other hand, if oazy ground be obtained in any depth of water between 62 and 92 fathoms, you may be sure you are within that distance, and consequently to the northward of the latitude of  $51^{\circ} 10'$  north; for, were you to the southward of that parallel, the ground between these limits would be totally free from oaze, until you had advanced as far eastward as the meridian of Cape Clear. This fact will prove of great importance to vessels navigating here in thick weather, or when striving to gain an offing to the westward, with scant south-westerly winds.

"When sailing eastward, in the parallel of  $51^{\circ} 10'$  north, or to the southward of it, if the soundings have decreased to 60 fathoms (no matter as to the quality of the ground), you may, with equal confidence, conclude that you are upon or to the eastward of the meridian of Brow Head, viz.:— $9^{\circ} 46'$  west, and may shape a course along the Irish coast, if necessary, N.  $68^{\circ}$  E. (true) or E.  $\frac{3}{4}$  S. This course will carry you 4 leagues at least to the southward of the Fasnet Rock, and nearly the same distance without all the headlands, as far eastward as the Hook lighthouse: such is the regularity in the direction of the Irish coast between these limits.

"The centre of Hurd Bank lies in latitude  $51^{\circ} 13'$  north, and longitude  $10^{\circ} 37'$  west. It extends in an E.N.E. and W.S.W. direction, and is 7 miles where broadest, which is at the eastern end. Mount Gabriel just appearing to the westward of the Mizen Peak, and the Bull Rock in one with the eastern part of the westernmost Hog Island, are the marks for the middle of the bank, on all parts whereof are from 83 to 86 fathoms water, and from 90 to 100 all round it. It is greatly resorted to by the Irish fishermen in the summer season, and produces great quantities of fish, especially cod, ling, and conger-eels.

"On the parallel of the Fasnet, and in the longitude of  $11^{\circ} 34'$  west, are 286 fathoms water, the ground a sort of fine dark vicious brown sand. This is the edge of the bank.

Thence, as you proceed eastward, the depths decrease very suddenly. In the longitude of  $11^{\circ}$  are 96 fathoms, very fine dark sand. From thence to the longitude of  $10^{\circ} 30'$ , the depth decreases more gradually, viz.:—about 4 fathoms every 5 miles; and again decreases, very suddenly, until within  $5\frac{1}{2}$  leagues of the land. At 7 leagues westward of Mizen Head there are 60 fathoms, oazy ground; and not farther off than 10 leagues 80 fathoms will be found, the bottom oazy, as before."

**DURSEY ISLAND, &c.**—The bearing and distance from the western entrance of Bear Haven to Blackball Head are W. by N., 5 miles; from thence to Crow Head, W.N.W.,  $4\frac{1}{2}$  miles; and from Crow Head to the S.W. end of Dursey Island, N.W. by N.,  $2\frac{1}{2}$  miles, all the coast being high and precipitous.

The *Calf Rock* lies  $17\frac{1}{2}$  miles N.W.  $\frac{3}{4}$  N. from Mizen Head; 15 miles N.W.  $\frac{1}{2}$  W. from Sheep's Head; and from the Cat Rock, which lies off Crow Head, W. by N., above  $2\frac{1}{2}$  miles. *Bull, Cow, and Calf Rocks* lie near Dursey Island, to the westward. They are four in number, always above water, and have 36 fathoms close to them. The Bull Rock lies 3 miles N.N.W.  $\frac{1}{2}$  W. from the Calf; and the Cow Rock is between the Calf and Bull. About 4 miles S.S.W. from Crow Head lie the *Grelah Rocks*. They are a patch of rocky ground, known to the fishermen, but not dangerous. They bear from Sheep's Head W.N.W.  $\frac{3}{4}$  W., 12 miles. W. by S., 6 miles from the west point of Dursey Island, and 20 miles N.W.  $\frac{1}{2}$  W. from Mizen Head, is the *Leck Bank*, extending N.W. and S.E., several miles, with from 32 to 45 fathoms over it, and 65 all around.

Between Dursey Island and Cod's Head lies Ballydonagan Bay, in which the water all over is deep, having from 30 to 24 fathoms close to the shore; and between Cod's Head and Goges Point is Quolagh Bay. In it there are such a number of *rocks*, that it is seldom used; but a ship may anchor on the north side, in 16 or 18 fathoms, about  $2\frac{1}{2}$  cables' length westward of the island Ennis Fernard. There is a *rock*, about 2 cables' length to the westward of the Island, and a small *shoal*, about  $\frac{1}{2}$  a cable's length W. by N. from it, with  $2\frac{1}{2}$  fathoms on it. It lies with the west end of Dursey Island a ship's length open of Cod's Head. With easterly winds and moderate weather, ships may anchor anywhere between Dursey Island and Crow Head.

**KENMARE RIVER** has plenty of water, and good ground. You have nothing to fear out of the bays except *Maiden Rock*, which lies between Ardea Castle and Rossmore Island, but nearest to Rossmore, and has only 6 feet on it at low water; and *Roanharick Rocks*, which extend about a mile westward of Kepinacass Island, the westernmost and easternmost of which rocks are always above water; but S.W.  $\frac{1}{2}$  W., a cable's length from the highest of the westernmost rocks, lies a small *rock*, which dries at half-ebb. The best harbours in Kenmare River are Ardgroom, Kilmachalog, and Sneem.

**ARDGROOM HARBOUR**, on the south side of Kenmare, and opposite to Sneem, is fit for vessels of 12 or 13 feet water. In sailing in, keep on the west side of Carrickavanheen Rock, which is always above water, and across near the east end of the rocky shoal which quite crosses the harbour at the entrance, and dries at the west end, near the point,  $\frac{1}{2}$  a cable's length from the shore at low water mark. Vessels of 10 feet water should wait half-flood to go in. Anchor in the creek, on the west side of the bay, a little westward of the beachy point, in 4 or 5 fathoms. On the east side of Carrickavanheen Rock there is a *shoal*, which extends above a cable's length from it, on which the least water is 12 feet.

**KILMACHALOG HARBOUR** is well sheltered, and fit for large ships. Anchor on the east or west side of Dutch Island, in 5 or 6 fathoms. On the east side of this harbour lies *Carricknacloir*, a *rocky shoal*, which extends W.N.W. from the corner of the grassy cliff,  $\frac{1}{2}$  over, on the middle of which are 4 feet at low water, but 6 at the west end of it. To clear it, keep near to the west side; or bring Dutch Island S. by W. in a line with the easternmost top of Drume Hill, on which are three sharp-topped hummocks. In bad weather small vessels may ride, well sheltered, in the creek on the east side of the harbour, in 2 fathoms at low water. To clear the shoals on each side the entry, sailing in, keep the westernmost house of Kilmachalog on with the flat-topped hill above it.

**SNEEM HARBOUR** is on the north side of Kenmare River. The only part in which ships may ride, is that which is sheltered on the south side by the east point of Garinish Island. It has good ground, and the depth of water is sufficient for large



ships; but they must ride short, to avoid the shoal water, unless the wind be westerly. The middle of the harbour is much exposed, and has foul ground in many parts, and therefore is not fit to ride in long. From this roadstead to Lamb Head, the bearing and distance are W.  $\frac{1}{2}$  N., 2 $\frac{1}{2}$  leagues. To the westward of Lamb Head are the Hog Islands.

**BALLINSKELLIGS BAY.**—N. by E.  $\frac{1}{2}$  E., distant 12 $\frac{1}{2}$  miles from the Bull Rock, is Bolus Head; and 5 miles S.E. by E.  $\frac{1}{2}$  E. from Bolus Head is Hog's Head. These form the entrance to Ballinskelligs Bay: it is quite exposed to S.W. winds, and but little frequented. About S.W., 2 $\frac{1}{2}$  miles from Hog's Head, lie the Hog and Scara Islands, with 28 fathoms water close to them. Eastward from these islands lie several smaller ones. Close to the Hog Islands are 28 to 30 fathoms water.

**The SKELLIGS.**—About 14 miles N.  $\frac{3}{4}$  W. from the Bull Rock is the *Great or Westernmost Skellig Rock*, always above water: 1 $\frac{1}{2}$  mile to the eastward of which is the *Little Skellig*; and between the latter and Puffin Island lies the *Lemon Rock*. This rock lies N.W.  $\frac{1}{2}$  W. from Bolus Head, distant 4 miles. It appears at half-ebb, and has near its southern side 30 fathoms water. Except this rock there is no other danger to be apprehended in this passage but what arises from the tide, which divides somewhat to the westward, one branch setting to the northward, and the other southward. There are 30 fathoms water between the Lemon Rock and the main land, and 40 fathoms very close to the Skelligs.

Upon the Great Skellig are erected two lighthouses, the one higher than the other, bearing two bright fixed lights, appearing like stars of the first magnitude, at the distance of 4 or 5 leagues in clear weather. The high light is 372 feet, and the low light 175 feet above high water. These lights, when seen in a line, bear from each other N. by E. and S. by W., distant 650 feet, forming a direction for the Foze and Bull Rocks. By bringing them open a handspike's length, you will give the Foze Rock a berth of 5 miles, and the Bull a berth of 3 miles. The Great Skellig lies at about 13 miles N. by W. from the Bull Rock.

About 8 miles N.E. by E.  $\frac{1}{2}$  E. from the Great Skellig Rock, is Bray Head, on Valentia Island; and about 6 $\frac{1}{2}$  miles eastward from the Head, is Valentia Harbour.

**VALENTIA HARBOUR** is well sheltered, and capable of receiving the largest ships. The best entrance is at the east end of the island. Anchor on the south side of Begginish Island, anywhere between it and the easternmost point of Valentia, above a cable's length from the shore, in 5 or 6 fathoms; or past Foot's Point, and anchor in 4 fathoms off Ringlass House. Near the entrance is *Harbour Rock*, which has a perch on it, lying near the west side, about  $\frac{1}{4}$  of a mile to the southward of the ruinous houses called Cromwell's Fort: it dries at quarter-ebb, and is to be left on the starboard side going in. The Church on Valentia Island S.  $\frac{1}{2}$  E., midway between Cromwell's Fort and Begginish Island, leads into the harbour, and to the eastward of Harbour Rock; or rather, when passing Cromwell's Fort, keep  $\frac{1}{2}$  nearer thereto than to Begginish, by which you will avoid the reef of rocks which projects north-westward from the latter island, and which forms the narrowest part. Douglas Head, shut in behind Begginish Island, leads to the eastward; the south point of Begginish Island, on with Bennetree Peak, to the northward; and Cahirciveen Church, just open of Begginish, to the southward of Harbour Rock. Near the west end of Begginish Island, and over against Cromwell's Fort, are *two small rocks*, which lie  $\frac{1}{4}$  of a cable's length farther out than the other rocks: one of the two dries at half-ebb, the other about low water. The west entrance of Valentia is free from shoals as far up as Portmagee; opposite to which, on the Valentia side, vessels may stop in a sandy bay, pretty well sheltered, in 2 fathoms; but to go higher up the channel requires a pilot.

**VALENTIA LIGHT.**—A lighthouse has been erected on the point of Valentia Island, from which a fixed white light has been exhibited since the evening of February 1st, 1841. This structure stands within the old building of Cromwell's Fort, on the western side of the principal entrance into the harbour, and bears from Reenadrolaan Point S.E. by E., distant 1 $\frac{1}{2}$  mile; Douglas Head S.S.W.  $\frac{3}{4}$  W., 1 $\frac{1}{2}$  mile; and Clackavalig (sunken rock) W. by S., 1 $\frac{3}{4}$  cable's length. The light is open seaward from N.W. to S.S.E.  $\frac{3}{4}$  E., and elevated 54 feet above the level of high water, spring-tides, and 60 feet above the mean level of the sea. The light, kept open, will lead clear of Reenadrolaan Point, and also of the Harbour Rock within the entrance. *Shelving rocks*, partly

covered at high water, extend  $\frac{3}{4}$  of a cable's length from Cromwell's Fort. It is high water, full and change, at 3h. 35m.: spring-tides rise 12 feet, and neaps 6 or 7.

Captain White, R.N., gives the following directions for entering Valentia Harbour:—"Steer in for Douglas Head, giving the northern side of the island of Valentia a berth of about a mile or more, until Cromwell's Fort bears S. by E., which will then be in one with the square tower of the church standing on the cliff of Valentia Island, considerably above the water's edge, and close to which stands the parsonage house. This mark will lead you to the entrance of the harbour. When passing Cromwell's Fort, keep  $\frac{1}{2}$  nearer thereto than to Begginish, by which you will avoid the reef of rocks which project north-eastward from the latter island, and which form the narrowest part. On the end of this reef, which is called Clackavalig, there are but 4 feet at low water at 2 cables' length from the point of Begginish: it will be avoided by keeping the south point of Begginish a little open to the eastward of the east point of Valentia Island, called the Fort.

"You must not be intimidated by the formidable appearance which the shores of Begginish oppose to your entrance, or the contiguity of the rocky point on which Cromwell's Fort stands. Be bold and decisive, as nothing is to be apprehended. Having passed the narrows, steer along the side of Begginish, in order to escape the *rock* which lies to the south-eastward of Cromwell's Fort, a little to the southward of the fairway in, and which will be avoided as long as Douglas Head is kept shut in behind the west end of Begginish; or by keeping Bennetree Mountain over the south point of Begginish, till within 2 cables' length of this point. In rounding this point, you will open the little white Church of Cahirciveen, which stands some distance up the river to the eastward, and being white-washed is very conspicuous; and you will be approaching the anchorage, the best position for which is pointed out by the following intersections:—The ruined castle of Bally Carberry, which stands on the northern side of Cahir River, in one with the S.E. side of Church Island, bearing E.  $\frac{1}{2}$  N.; and Cromwell's Fort touching the S.E. point of Begginish.

"In strong breezes from the westward, the space between Cromwell's Fort and the island of Begginish is one continued sheet of breakers, which renders it necessary that fresh-way should be preserved on the ship, lest she be warped so far out of her proper direction, as to receive the impulse of the sea on the quarter, which would certainly prove disastrous. Notwithstanding the apparent difficulties, however, which seem to present themselves in making out and entering the harbour of Valentia, the attempt, under the most unfavourable circumstances, is far preferable to the risk of passing a winter's night in Dingle Bay.

"The flood-tide runs fairly in, according to the trend of the land, and the ebb as regularly out; but the strength of neither is material, unless in the narrows."

**DINGLE BAY** lies nearly E. by S. and W. by N., and the shores on both sides are steep. There are only *two rocks* on either side that require particular attention; the one is called *Crow Rock*, and lies  $\frac{1}{2}$  a mile westward from Dingle Harbour, nearly  $\frac{1}{2}$  a mile from the shore; it is covered with spring-tides only, and it is steep to all round: the other lies eastward of Kaynalass Point, and dries with spring-tides only. Between it and Kalla there are from 18 to 11 fathoms very near the shore; and between Kalla and the bar of Castlemain, there are from 9 to 5 fathoms. In moderate weather a ship may anchor, in any part of the bay above a mile from the shore, on clear ground.

**VENTRY HARBOUR** is easy of access, and has sufficient water for large ships; but with westerly winds it is subject to heavy squalls from the mountains. The safest anchorage for large ships is half-way up, and near the middle, in 4 or 5 fathoms. Small vessels may go farther up, and ride nearest the south side. It is open to the S.E.; and even westerly winds send in an uneasy swell; therefore, Ventry cannot be recommended as a safe anchorage during the winter months.

When coming from the south-westward, the harbour cannot in the first instance be clearly made out, owing to the main land, with which the peninsula forming the southern part of Ventry Harbour appears, at any considerable distance, to be in some degree identified. There is, however, at about a mile to the westward of it, an old house, or building, formerly used as a look-out station, standing near the edge of the precipice, which, together with the two black rocks attached to the western point of the harbour, will serve, on a nearer approach, to mark the entrance. Should these not be sufficiently

conspicuous, bring Cromwell's Fort, at Valentia, open to the westward of the perpendicular pitch of Douglas Head.

**CASTLEMAIN HARBOUR** is difficult of access, as there is a bar across the entrance of it, on which is only  $1\frac{1}{2}$  fathom at low water. Ships of 12 feet water may go over the bar at half-flood; but this harbour should not be attempted without a pilot.

**DINGLE HARBOUR** is only fit for small vessels; and these must lie aground at low water, on soft mud. In sailing in, take a leading wind and flood-tide: keep  $\frac{1}{2}$  from the west side of the entry, as there is a ledge of rocks, which extend half over from Lach Point to Ring Beg. When abreast of Ring Beg, stand W.  $\frac{1}{2}$  N.; and when the harbour's mouth is just shut in, and Carew Houses bear S.W.  $\frac{1}{2}$  W., anchor a cable's length from the shore. Nearly  $\frac{1}{2}$  a cable's length northward from Ring Beg Point lies a bank, that dries with spring-tides. About  $\frac{1}{2}$  a mile to the westward of the entrance to the harbour, is the Crow Rock, already described.

**BLASKETS.**—About 5 miles W.N.W. from the entrance of Ventry, lies Dunmore Head; and W.  $\frac{1}{2}$  S.,  $3\frac{1}{2}$  miles from Dunmore Head, lies the west end of the Great Blasket; and from it about 2 miles, S.W. by W., lies Inishmakalaan, the southernmost of the Ferriter's Islands, from which the Foze Rock lies west, about  $2\frac{1}{2}$  miles. About 2 miles N.E.  $\frac{1}{2}$  N. from the Foze Rock, is the westernmost of the *Tiraught Rocks*. At  $4\frac{1}{2}$  miles N.E. by E.  $\frac{1}{2}$  E. from the westernmost Tiraught Rock, lies Ennis Tuiskero, which lies W.  $\frac{1}{2}$  S., 4 miles from Sybel Head.

The east end of the Great Blasket lies about a mile westward from Dunmore Head, from this end of the Blasket there is a cluster of rocks, which extend above a mile N.N.E., some of which are always above water, some dry at half-ebb, and others at low water. By clearing the northernmost of these rocks, which is always above water, you clear the whole. A *sunken rock* has lately been discovered at the east end of the Great Blasket, of considerable extent, having only 2 and  $2\frac{1}{2}$  fathoms water upon it, while at either end there are about 30 fathoms.

In Great Blasket Sound, about a cable's length westward from a remarkable rock near Dunmore Point, there is a small rock, which dries at half-ebb.

At  $4\frac{1}{2}$  miles N.E. by N. from Dunmore Head is Sybel Head; and east, about  $3\frac{1}{2}$  miles from Sybel Head, is Dunorlin Head, the westernmost point of Smerwick Bay.

**SMERWICK BAY** is an unsafe harbour, being open to the winds from north to N.W., and in many places foul ground. The best anchorage is on the west side, below Smerwick village, above a cable's length from the shore, in 6 or 7 fathoms water.

**BRANDON HEAD** is about  $7\frac{1}{2}$  miles E.  $\frac{1}{2}$  S. from Ballydavid Head, the easternmost point of Smerwick Bay; and 12 miles E.N.E.  $\frac{1}{2}$  E. from Brandon Head is Kerry Head. Between these two heads lie Brandon and Tralee Bays. In fine weather vessels may anchor on the west of Brandon Bay.

To the northward of Machri Point, which separates Brandon Bay from that of Tralee, lie the islets called the Seven Hogs, with numerous rocks, which, as they will be seen, require no further description.

**TRALEE BAY** has several rocks at its entrance. E.  $\frac{1}{2}$  S.,  $2\frac{1}{2}$  miles from the east point of Machri, lies *Muckloch Rock*, always above water;  $\frac{1}{4}$  of a mile to the N.N.E. of which lies a shoal, on which there is always a heavy swell. At about  $\frac{1}{4}$  of a mile E.S.E. from a low rock next the Muckloch, lies another, called the *False Boat Rock*, which dries at half-ebb. These dangers may be avoided, by keeping  $\frac{1}{2}$  over from Muckloch Beg, and  $\frac{3}{4}$  from the Muckloch Rock. Vessels may anchor to the westward of Fenit, nearly in the middle of the bay, in 3 or 4 fathoms; but they ought not, even in summer, to lie long in the open bay.

**TRALEE HARBOUR** has good holding ground; but the channel is narrow, and, except with east or west winds, a vessel cannot ride with more than  $\frac{1}{2}$  a cable. The best anchorage is on the east side of the largest Samphire Island, about a cable's length from the shore, in 3 or 4 fathoms. In sailing in, take flood-tide, and keep  $\frac{1}{2}$  a cable's length from the south side of the island. According to the report of Mr. Nimmo, the engineer, who lately surveyed this harbour, it will admit vessels of 200 tons burthen, which, when the intended quay shall be erected, may be brought up safely alongside of the town. Great quantities of herrings are caught in this bay during the fishing season; and on one side of the bay there is a fine chalybeate spring, flowing from a small bank of yellow clay mixed with gravel.

**THE RIVER SHANNON** is capable of receiving the largest ships, is easy of access,

and has good ground. The situation of the river may be distinguished 15 leagues off at sea, by the Brandon Mountains, which are very high land. On approaching nearer the coast you will discover the Blasket Islands, and the lighthouse on Loop Head. This light may be seen, in clear weather, at the distance of 7 leagues. It exhibits a bright fixed light from a white tower, 49 feet high, and 269 feet above high water level, visible from all points between E.S.E.  $\frac{1}{2}$  E., westerly, or seaward, to E. by N. The lighthouse is in latitude  $52^{\circ} 34'$  north, and longitude  $9^{\circ} 52'$  west. The entrance to the Shannon is formed by Loop Head on the north, and Kerry Head on the south side; the former bears from the latter N.N.E., distant 10 miles. Between them are from 14 to 27 fathoms water.

In almost all parts of the river above Kilcradan Point, vessels may anchor; but the best anchorage for large ships is in Labbasheda Bay, and on the east side of Rinnallan Point, as far up as Foyn's Islands. At 16 miles E. by N.  $\frac{3}{4}$  N. from Kerry Head, and 12 miles E.S.E.  $\frac{1}{2}$  E. from Loop Head, is Beal Point, on the south side of the river.

In standing for the different anchorages in this river, the following dangers are to be avoided:—*Kilstiffin Bank*, of 4 fathoms, which lies with Kilcradan light bearing E.N.E., distant a mile. *Beal Bar* extends  $\frac{3}{4}$  of a mile from Beal Point, part of which, nearly  $\frac{1}{2}$  a mile from the shore, dries with spring-tides. On the outer edge of it are  $3\frac{1}{2}$  fathoms at low water; in the ripple, near the edge of the bar, there are from 14 to 18 fathoms. Between Kilconly Point and Beal Point, the *shoal* of 3 fathoms runs off, nearly a mile from the shore; just above Kilcradan Point it reaches nearly half-channel across. To clear this shoal, keep Ray Peak in one with Kilcradan lighthouse; but the customary pilot-mark is, to keep Ray Peak in one with Kilclogher Cliff.

A LIGHTHOUSE is erected on Kilcradan Point, bearing from Kerry Head about E.N.E. It exhibits a steady light, of a deep-red colour, towards the sea, but a bright white light towards the river. The lantern is 133 feet above the level of high water; and the light may be distinguished, in clear weather, 3 or 4 leagues off.

**DONAHA SHOAL**, having only 3 fathoms on it at low spring-tides, lies with Carrigaholt Town, bearing W.N.W.  $\frac{1}{2}$  N., distant 2 miles; Traabaun Point N.N.W., 9-10ths of a mile; and Beal Point sand-hills S. by E.,  $1\frac{1}{2}$  mile. There is also a *knoll*, of  $4\frac{1}{2}$  fathoms, lying a mile E.  $\frac{1}{2}$  N. from Kilcradan Point, having from 7 to 8 fathoms near it; and a *rock*, with 5 fathoms over it, lying E. by S.  $\frac{1}{2}$  S., distant a mile from Donaha Shoal. The Donaha is about 3 cables' length from east to west, and  $1\frac{1}{2}$  from north to south.

At 4 miles E.S.E.  $\frac{1}{2}$  E. from Beal Bar is the *Rinana*, a *rocky shoal*, which extends southward  $\frac{3}{4}$  of a mile from the south end of Scattery Island; but there is a channel between it and the island, called Rinana Swash: Caherdoty House just open north of the lime-kilns, bearing E.S.E.  $\frac{1}{2}$  E., leads through, in  $4\frac{1}{2}$  fathoms. On the north end of this shoal there are  $2\frac{1}{2}$  fathoms, and on the other parts of it there are  $3\frac{1}{2}$  fathoms at low water: so that it is only in the way of large ships. To clear it on the south end, keep the top of Ray Peak in one with Kilcradan Head, bearing W.N.W.  $\frac{1}{4}$  W. Along the west side of Scattery, in most parts, *stony flats* extend off near 2 cables' length, some of which show at low spring-tides; and without these a *flat*, of 2 fathoms, runs off to 4 cables' length westward of the island; and along the north side lies a *rock*, about a cable's length from shore, which dries with spring-tides only. A *sand-bank* likewise extends from the east end of that rock to the N.E. point of Scattery, from which the shoal extends to the northward full 3 cables' length, joining the Cusheen Banks to the westward, and forming the south side of the Kilrush Channel; the leading-mark through which is, the high stores at Kilrush and the white house at Watch-house Point in one, bearing E.  $\frac{1}{2}$  N. Also on the east side of Scattery, opposite to Hog Island, there is a *rock*, called *Carrig Donaum*, a cable's length from the shore, which only dries with low spring-tides; and near the old buildings on the same side of the island there is a *spit of sand*, which extends more than 2 cables' length from the island, on which the least water is 3 feet.

About  $5\frac{1}{2}$  miles S.E.  $\frac{3}{4}$  E. from the south end of Scattery Island, is Tarbert Point and *Rock*. Upon the latter a lighthouse is erected, exhibiting a bright fixed light. This light is not shown landward from S.  $\frac{1}{4}$  W. to E.  $\frac{1}{2}$  N., and the lantern is 58 feet above the level of high water.\*

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\* We are informed, that a pier-head is to be constructed, and a bridge erected across from Tarbert demesne to the island, so that carriages may pass the pier. The work will prove of

Carrig Island lies  $1\frac{1}{2}$  mile to the southward of Scattery Island. A *shoal*, of  $2\frac{1}{2}$  fathoms, runs off from the north side of Carrig Island, nearly  $\frac{3}{4}$  of a mile. Kilclogher Head touching Beal Point, W.N.W.  $\frac{1}{4}$  W., clears Carrig Shoal, in 5 fathoms.

In Tarbert Bay (at the bottom of which is the town of Tarbert) a ship may anchor, about  $\frac{1}{2}$  a mile to the southward of Tarbert Point, in 4 to 8 fathoms. It is high water at Tarbert lighthouse at 4h. 57m.; spring-tides rise 15 feet, neaps 10.

**BOWLING ROCK.**—About a mile to the southward of Kilkerrin Point, and at 2 cables' length from the eastern shore, lies the *Bowling Rock*, on which an iron perch is erected. This rock uncovers at the last quarter spring-tides. A *shoal* surrounds the rock a full cable's length on all sides, leaving a narrow channel, of  $2\frac{1}{2}$  fathoms, between it and the main. Rock Lodge kept well open south of Colman's Point, bearing E.S.E., clears the Bowling Rock, in 6 fathoms.

**The OYSTER BANK** stretches about 3 cables' length from Ballydonoghoe Point, on the south side, with 2 to  $2\frac{1}{2}$  fathoms on it, narrowing the channel between it and the Bowling Rock to 6 cables' length. Glin Church kept open east of Glin Castle, clears the Oyster Bank to the northward.

**The LONG ROCK**, which uncovers at half-tide, lies 3 miles to the eastward of the Oyster Bank, and runs off full 3 cables' length from the shore. By keeping Loughhel Point just open of Gurraun Point, bearing about E. by S., will clear the Long Rock.

**CARRIGEEN ROCK** lies 2 miles to the eastward of the Long Rock, and at about 3 cables' length from the shore: it uncovers at low water. The thwart-mark for it is, the Fairy Lawn just open east of Hip Hall; and Mount Trenchard open north of Loughhel Point, clears the rock to the northward. All the way from Carrigeen Rock to Foynes Island, you may stand to within  $1\frac{1}{2}$  cable's length of the south shore. It is high water at Foynes Island, on the full and change days of the moon, at 5h. 35m.; springs rise 16 feet, neaps  $12\frac{1}{2}$ .

From the Bowling Rock to Red Cap Point, the north shore is all clear to within a cable's length. Red Cap Point is the western point of Labbasheeda Bay. At this point an extensive *flat* commences, which runs to the eastward above 2 miles; and abreast of Labbasheeda Town it extends full  $\frac{1}{2}$  a mile from the shore, some parts of which uncover at low water, spring-tides, particularly the *Dillish Rocks*, on the east side of the bay. The mark to clear them to the southward, is the Chapel, twice its breadth open of Labbasheeda Point, bearing N.W. There is good anchorage within  $\frac{1}{2}$  a mile to the eastward of Red Cap Point, in from 6 to 9 fathoms.

Rinalan Point lies 2 miles to the eastward of the Dillish Rocks, between which the shore should have a berth given it of at least 2 cables' length. When standing in, keep the lead going, to avoid the flats that run off. When approaching the Dillish Rocks, you will be abreast of them when the high road ( $\frac{1}{2}$  a mile eastward of the town) is open, bearing N. by E. From Rinalan Point to the Turf Ferry House, abreast of Foynes Island, you may approach the shore to within a cable's length. No stranger ought to attempt to proceed farther than Foynes Island without a pilot.

**FOYNES HARBOUR** is to the southward of the island. The western entrance is about a cable's length in width, with  $3\frac{1}{2}$  fathoms in it; inside are 9 and 10 fathoms. The leading-mark in, is the Durnish Farm-house in one with Barneen Point, bearing nearly S.E.  $\frac{1}{4}$  E. You may anchor off this entrance, in 8 or 9 fathoms, with Lehy's Hill S.E. by S.

Aughinish Point lies  $1\frac{1}{2}$  mile to the eastward of Foynes Island; and at  $1\frac{1}{2}$  mile east from Aughinish Point lie *three beds of rocks*, near the middle of the river, occupying a space of nearly a mile from east to west, and about half that distance from north to south. The western one is called the *Cork Rock*, and is covered at high water, spring-tides; the eastern one is named *Wide Rock*; and the southern one *Beeves Rock*, on which a tower is erected. The principal channel is to the southward of this tower, or between it and the Herring Rocks to the southward. The highest part of Foynes Island well open of Aughinish Point, will clear the Herring Rocks on the north side. In this part of the channel, and eastward of the tower on Beeves Rock, the ebb-tide sets

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great utility, Tarbert being the port of admission into Kerry from the interior of the country, by the inland navigation from Dublin, and also a much frequented place for vessels in distress, after a long Transatlantic voyage.

strongly to the W.S.W. upon Herring Rocks, the southern part of which uncovers at half-tide; and there are only 3 feet water full 2 cables' length to the northward of this part, over which the spring-ebbs set at the rate of 4 knots.

Ballyvoher Point lies at  $2\frac{1}{2}$  miles E. by S.  $\frac{1}{2}$  S. from the tower on Beeves Rocks. The channel between lies about  $\frac{1}{2}$  a mile from the southern shore, leaving several islets and rocky shoals to the northward of you; to clear which, you must keep Aughinish Farm well open south of the tower on Beeves Rocks.

Ballyvoher Point and Beagh Quay may be passed at the distance of 2 cables' length. Off Beagh Quay an extensive *sand* or *middle ground* commences, running to the eastward as far as Sod Island, and dividing the river into two channels. On this bank are *four beds of rocks*, to the westward of Sod Island and the Bird Rocks, on the east end. The westernmost of these rocks is called *Carrig Keal*, and uncovers at three-quarters' ebb, and bears E.  $\frac{1}{2}$  N., distant  $1\frac{1}{2}$  mile from Beagh Quay. The next, to the eastward, is called the *Horse Rock*; it uncovers at quarter-ebb. The third is called the *Bridge Rock*, and is only covered at high spring-tides. The fourth is called *Little Limerick*; it uncovers at half-tide. Sod Island is 30 feet high, and is surrounded by *rocks*; and the Bird Rocks, which are near the east end of the bank, cover at the first quarter-flood. In mid-channel, and S.S.E. from Carrig Keal Rocks, lies the *Waller Bank*, having only 3 feet on it at low water. It extends north and south a cable's length, and is about half that breadth.

The *Bridge Rocks*, on the south side, are several *patches*, which cover at the first quarter-flood, and are surrounded by shallow water: they lie full 3 cables' length from Ringmoyle Quay. The *Gallivan Rock* is also on the south side of the channel, and bears S.W. by W. from Sod Island,  $\frac{1}{2}$  a mile.

When sailing up the south channel from Beagh Quay to Sod Island, give the quay a berth of 2 cables' length; then bring Aughinish and Ballyvoher Points in one, bearing W.  $\frac{3}{4}$  N. This mark will lead you clear of the north end of the Waller Bank: and as soon as Castletown House, a remarkable white house on the south side of the river, comes on with Pickett Island, bearing S. by W.  $\frac{3}{4}$  W., you are to the eastward of the Waller Bank, and must prepare to alter your course  $\frac{3}{4}$  of a point more easterly, by bringing Bunker Hill half-way between the south bluff of Cain Island and the houses on that island, bearing E.S.E.  $\frac{1}{2}$  E. This latter mark will lead you through the channel, to within  $\frac{1}{2}$  a mile of Cain Island, leaving all the rocks on the middle ground and Sod Island on the north, and Bridge Rocks and the Gallivan on the south side. It is high water near Sod Island, on full and change days of the moon, at 6 o'clock; springs rise 19 feet, neaps 15.

There are many *rocks* and *shoals* between Cain Island and Limerick, which makes a pilot thence absolutely necessary for such small vessels as may have occasion to go up to the town of Limerick.

Vessels may anchor in the following parts of the River Shannon:—

In Carrigaholt Bay, between Carrigaholt Castle and Kileradan Point, is good holding ground. Anchor when the castle bears north, and Kileradan Point S.W., in 3 to 6 fathoms. The stream of tide in this bay always runs southward, but  $1\frac{1}{2}$  mile an hour when strongest.

In Scatterry Road, eastward of the island, there is good anchorage. Large ships should anchor with Rinana Point W. by N.  $\frac{1}{2}$  N., in 7 or 8 fathoms, about  $\frac{1}{2}$  a mile from the island. Smaller vessels may anchor within  $\frac{1}{2}$  of a mile of the island, in 4 or 5 fathoms, with Rinana Point bearing west. There is also good anchorage in Tarbert Road, about  $\frac{1}{2}$  a mile south of the lighthouse, in 7 or 8 fathoms. Labbasheeda Bay is also a good roadstead, with Red Cap Point about W.N.W., distant  $\frac{1}{2}$  of a mile, in 6 to 10 fathoms; and you may anchor between Cain Island and Grass Island, in 20 feet at low water.

**TIDES.**—It is high water, on full and change days, at the Blaskets, and entrance of the Shannon, at 3h. 45m.; at Carrigaholt, 4h. 44m.; at Tarbert Island, 4h. 57m.; at Foynes, 5h. 35m.; at Beagh Quay, 5h. 49m.; and at Limerick Quay, 6h. 15m. The vertical rise of the tides at the Blaskets is 8 feet on spring-tides, and 4 feet on neap-tides; at the entrance of the Shannon, spring-tides rise 11 feet, neap-tides 7 feet; at Carrigaholt, spring-tides rise 12 feet 11 inches, neap-tides 9 feet 4 inches; at Tarbert Island, spring-tides rise 15 feet, neap-tides 10 feet; at Foynes Island, spring-tides rise

[S., W., & N. COA. OF IRE.]

16 feet, neap-tides 12 feet; at Beagh Quay, spring-tides rise 18 feet, neap-tides 13 feet; and at Limerick Quay, spring-tides rise 18 feet 9 inches, neap-tides 13 feet 10 inches; and the time of low water is generally 6 hours after the time of high water.

Along the south coast of Ireland the stream of flood sets from the westward, and the ebb the contrary way. Off the Skellig Rocks it divides into two branches, one stream running northerly along the coast, the other running south-eastward to Cape Clear, and along the south coast of Ireland for St. George's Channel. At the Bull, Cow, and Calf Rocks, the stream of flood does not begin to run until it is half-ebb on the adjacent shore; nor does the stream of ebb begin to run from the south-eastward until it is half-ebb on the shore. Between the Bull, Cow, and Calf Rocks and Dursey, its velocity, with spring-tides, is 3 miles an hour, neap-tides 1 mile; in Dursey Sound, 4 miles when strongest; in Kenmare River it is scarcely perceptible, until nearly as far up as Rosmore Island, where it runs about  $\frac{1}{2}$  a mile an hour. Near Mizen Head the ebb runs  $3\frac{1}{2}$  miles an hour, making a rough sea, while the flood, except in blowing weather, is hardly felt. Off Cape Clear, spring-tides sometimes run 4 knots an hour, decreasing their velocity as they proceed to the eastward; off Mine Head about  $1\frac{1}{2}$  mile an hour, but increasing again to 3 miles an hour off the Hook of Waterford, at which point the meeting of different streams occasion a kind of ripple on the water. At 3 or 4 miles off the Hook Point, the tide sets, for equal spaces of time, to the east and west, and the eastern stream runs until 8 o'clock; and off Cork until half-past 7. At 5 or 6 miles from the shore, its rapidity does not exceed  $1\frac{1}{2}$  mile an hour; but the current increases to 3 near the land. From Waterford to Saltees, it runs 3 miles an hour; at Saltees, 3 miles; and off the Tuskar, 4 miles an hour.

The northerly stream, which divides at Skelligs, sets in from the S.S.W., running a mile an hour. Spring-tides at the Blaskets run about 2 miles. In Dingle Bay it does not run above  $\frac{1}{2}$  a mile an hour, until near the entrance of Castlemain Harbour, where it runs about 2 miles. From the Blaskets to the Shannon it decreases its force, and becomes scarcely sensible; but up the Shannon, spring-tides run  $3\frac{1}{2}$  miles an hour, neaps 1 $\frac{1}{2}$ .

## THE WEST COAST OF IRELAND, FROM LOOP HEAD TO GALWAY, NEWPORT, AND ACHILL HEAD.

FROM Loop Head the shore runs north-easterly towards Galway Bay. The course and distance from Loop Head to Black Head, through the South Sound, is N.E. by E.  $\frac{3}{4}$  E., 42 miles.

The space between Loop Head and Arran Islands is generally denominated Mal Bay, and justly so called; for if vessels happen to be embayed there in blowing weather, the only places where there is the least chance of saving the ship, are on the north side of the Bay of Dunbeg, at high water, above the castle, or within a ledge of rocks opposite Mutton Island, which run westward from Seafield Point, or near Hag's Head, in the bight, on the east side of Liscannor Castle. In each of these places there is shelter from westerly winds, with sand and gravel to lie aground on. Nearly 7 miles N.  $\frac{1}{2}$  E. from Hag's Head, lies the Island of Inishere, the south-easternmost of the Arran Islands, which thence extend 13 miles N.W.  $\frac{1}{2}$  N.

**The ARRAN ISLANDS** lie before the mouth of Galway Bay, to which there are channels on all sides. That between Inishere and the main is called the South Sound, being about  $3\frac{1}{2}$  miles wide, with from 6 to 27 fathoms water, and without any danger, except a small rock on its south-eastern side, about  $\frac{1}{4}$  of a mile from the shore, which dries with spring-tides only.

To the N.W. of Inishere is Foul Sound, in which also a *rocky ledge* extends  $\frac{1}{2}$  over, and has 6 feet water upon it. This is the channel which divides Inishere and the adjoining island, called Inishmaan.

From the N.W. point of this latter island a *rocky ledge* runs northward, nearly 2 cables' length, and is the only danger in the channel between Inishmaan and Killane, or Arran Island. This passage is named Gregory's Sound. There is a bay, or *end of harbour*, in the Island of Killane, at the N.E. end, called by some Arran

Harbour, by others, Killane Bay. In this bay the ground is clean, and the water on the west side of Straw Island deep enough for large ships, but much exposed to east and N.E. winds, which set in with a great swell, and the ground will not hold in such hard gales; it is, therefore, fit only for moderate weather. Small vessels may anchor in the middle of the bay, in  $2\frac{1}{2}$  fathoms, and large ships about 2 cables' length to the westward of Straw Island, in 4 or 5 fathoms. The west side of the entrance is shallow  $\frac{1}{2}$  over toward Straw Island, which mariners must attend to. There is also a *ledge*, extending a cable's length eastward from Straw Island, which must be avoided in sailing either in or out at the eastward.

On the north side of the northernmost point of Killane Bay, is a *rock*, above  $\frac{1}{4}$  of a mile from the shore, and a *patch of sand* between it and the point, both drying with spring-tides; and on the east side of these a *rocky ledge* extends from the point northward, nearly as far off as the rock.

Off the east side of Killane Bay is also a *rock*, about 2 cables' length from the shore, which dries with spring-tides only.

Between the western point of Arran Island and the S.E. end of Branach Islands, are *two rocks*, one nearly midway in the channel, drying with spring-tides only, and the other nearer Arran, drying at half-ebb. The stream of tide in the channels of these islands runs not above 2 miles an hour.

A lighthouse has been erected on the Island of Arran, about  $\frac{1}{3}$  from its S.E., and  $\frac{1}{3}$  from its N.W. end. The light exhibited therein revolves, is of a bright colour, and attains its greatest magnitude once in every 3 minutes, being visible all round for 15 seconds, and obscured 2 minutes and 45 seconds. The light is 498 feet above the level of the sea at high water, and may be seen, in clear weather, 8 or 9 leagues.

To the north-eastward of the westernmost island of Arran, at about 5 miles distance, is Gulin Head, the intermediate space forming the North Sound, or entrance to Galway Bay, having, in mid-channel, from 20 to 35 fathoms.

The south entrance to Galway Bay is between Dunamacfeilin, in the county of Clare, and Inishere Island, in which, as already observed, there is no danger. Having rounded Black Head, sail on for Deer Island, from which a *ledge* extends eastward about  $\frac{1}{4}$  of a mile; and beyond it are *three rocks*, lying nearly in a line northward from the Point of Durus. These dry at half-ebb, the northern one being near mid-channel.

Between Black Head and Dear Island is Black Head Bay, where a vessel may lie, with moderate weather, or southerly winds, somewhat nearer to the eastern than the western side, in a depth of  $2\frac{1}{2}$  fathoms water; but in sailing along Finavarra Point, keep at some distance, as a *ledge* runs off a cable's length. Bring the castle, near the entrance of Finavarra Creek, to bear on with the south shoulder of a tapering hill to the eastward, then anchor. If you sail on the west side of Ilanlue Rock, or Loo Island, observe to keep within  $\frac{1}{4}$  a mile of it.

To the northward of Eddy Island is Pouvenish, or Poundvenish Harbour, being well sheltered, the ground good, and fit for vessels drawing not more than 10 feet water; only they must not venture in when it comes within 2 hours of low water, spring-tides; for then there are but 9 feet in the channel along Pouvenish Point. At the mouth of this harbour, westerly winds occasion a great swell; therefore, it should not then be attempted before half-flood, nor after half-ebb. You may anchor when the point shuts in the entrance, about 2 cables' length from the shore, in 2 or 3 fathoms water.

**NEW HARBOUR.**—To the north-eastward of Kilcorgan Point is the New Harbour; on the south side of which, near the western grove of trees, is a *ledge*, running northward, nearly a cable's length; and near the eastern grove lies a *rock*,  $\frac{1}{2}$  a cable's length from the shore, covered about high water. To avoid these going into the harbour, keep nearly in the middle.

A lighthouse has been erected on Mutton Island, in which a light is exhibited from sun-set to sun-rise. Mutton Island is about  $\frac{1}{2}$  a mile to the southward of the town of Galway, near the bottom of Galway Bay. The light is fixed, and of a brilliant red colour to seaward, but of a bright and natural appearance towards the land.

N.W.,  $2\frac{1}{2}$  miles from Kilcorgan Point, is *Black Rock*, on which is a perch, lying about  $\frac{1}{4}$  of a mile S.  $\frac{1}{4}$  W. from the White Cliff, drying with spring-tides only. To clear



it on the west side, bring Bara Cliff west of Gray Island. To clear it on the south side, bring Hare Island a ship's length open of the low water mark off the south end of Mutton Island; and to sail between it and the White Cliff, if necessary, keep Hare Island on with the south end of Mutton Island. About midway between Kilcorgan Point and Black Rock is a *rocky shoal*, called *Santa Margarett*, on the extremes of which are 16 feet at low water, spring-tides; and on the middle 12 feet. On its western edge is a buoy. The marks for this shoal are, Merlin's Park House on with the north point of Great Hare Island, or Mutton Island lighthouse, bearing north  $59^{\circ}$  east (true). For large vessels, the north side of the shoal is the best channel into Galway Road. There is a *ledge* running westward from the west side of Mutton Island, about a cable's length.

About  $\frac{1}{2}$  a mile north-westward from Ardfry Point lie the *Ilanirelog Rocks*, or *Ellan Craggs*, the extremity of which dries only with spring-tides; the other parts are covered at high water only; and about  $\frac{1}{2}$  of a mile south of Hare Island lies *Brickeen Rock*, which dries with spring-tides only, its mark being Merlin House on with Little Hare Island. On the north side of New Harbour is a small bight, in which vessels may lie aground in mud, well sheltered. In the bight are 5 and 6 feet at low water. This place is considered safer to wait a wind in than Galway Road.

**GALWAY ROAD** has good holding ground; but when the wind is between the south and W.S.W., a great swell sets in. The anchorage for small vessels is on the east side of Mutton Island, about 2 cables' length from the shore, when the middle of the island is on with Black Head. Ships drawing 10 or 12 feet must ride more to the south-eastward, so as to have Black Head fairly open of Mutton Island, the steeple of Galway bearing north. Vessels drawing 10 or 12 feet, may go into the harbour of Galway at high water, taking the last of the flood, steering in between the two perches, and lying between the two quays.

Vessels coming in from sea, and bound to Galway, after making the revolving light on Arran Island, may take either the north or south channels, as may be most convenient, both of which are clear of danger. The north shore, from Casleh Bay to Barna Creek, a distance of 5 leagues, is all clear. The south side is also free from danger; and there is anchorage for a large ship about 2 miles south-eastward of the Black Head, in 6 to 10 fathoms, bottom sand. After passing Black Head, by bringing Mutton Island lighthouse to bear E. by N., and proceeding with it in that direction, you will pass to the southward of the Black Rock, and carry not less than 5 fathoms up to the lighthouse, to which you must give a berth of a good cable's length; and as soon as the lighthouse bears N.W., within  $\frac{1}{2}$  a mile, down anchor.

The town of Galway is situated inland, at a considerable distance from the port, from which goods are conveyed by lighters and small craft. It was formerly a walled town, and contained many ancient buildings, most of which have been rebuilt. The collegiate church is an old gothic building; and the prison is a massy pile, situated at the west end of the town. It carries on a considerable traffic, having an exchange, and several linen manufactories. Its fisheries are productive and extensive; and large quantities of kelp are burned in the bay.

**CASLEH HARBOUR** lies to the westward of Galway Bay, and is a safe place for vessels drawing not more than 9 or 10 feet water. The best anchorage will be found near the head of the bay, on the west side, in 2 fathoms, the ground and shelter both good. Observe, in entering this bay, the *Rock Caninock*, which lies nearly midway, and dries with spring-ebbs only. To avoid it on the west side, keep Carriglas Point on, or a little east of Knockaballach Hill; or keep  $\frac{1}{2}$  from the shore, on the port or larboard hand, going in. To avoid it on the east side, keep within 2 cables' length of Cuddu Rock, which is on the starboard side, and always above water. Above  $\frac{1}{2}$  of a mile S.W. from Barraderry Point, you must avoid, in sailing in or out, a small *rock*, which dries at half-ebb. On the east side of Casleh Bay, about  $\frac{1}{2}$  a mile from Cuddu Rock, is a *ledge*, extending north-westward,  $\frac{1}{4}$  of a mile from two small islands in the mouth of a creek. Off the north side of Carriglas Point lie the *Carriklannug Rocks*, the S.E. end of which has 4 or 5 feet water over it. The rock at the N.W. end dries with spring-tides only. To avoid these rocks, keep  $\frac{3}{4}$  from Carriglas Point, and  $\frac{1}{2}$  from the point opposite. Steer on towards Knockaballach Hill, until Cuddu Rock appears a ship's length open of Carriglas Point, and anchor near the head of the bay.

*Carriklakeskin Rock* is at the head of the bay, and covered only at high water.

Ships that draw 11 or 12 feet, must ride a little eastward, in  $2\frac{1}{2}$  fathoms, right before the mouth of the harbour.

**GREATMAN'S BAY** is a place of good holding bottom, well sheltered, and fit for vessels drawing not above 12 or 14 feet water. Sailing into this harbour, you must be careful to avoid a small *rock*, dry at half-ebb, and lying nearly a cable's length south of Trebaan Point. Within this harbour, nearly a mile above the mouth, is a *rocky ledge*, extending, on the east side, about a cable's length from the shore, the extremity of which dries at three-quarters' ebb. To avoid this ledge, keep mid-channel, or nearer the west side; or bring the west shoulder of the western hill in Arran on with Trabaan Point, which is the S.E. point of Garomna Island.

About  $\frac{1}{2}$  a mile above this ledge, on the west side, is a *sandy shoal*, extending across the channel about  $\frac{3}{4}$  over, leaving a passage  $\frac{1}{2}$  a cable's length wide. The least water on this bank is 3 feet: this is near the middle, on the south side; on the other parts of it are 9 feet. To sail through this channel at low water, when you come near the bank, keep  $\frac{1}{2}$  a cable's length from the eastern shore, bringing the little Danish Fort on Arran just open of Trabaan Point. At half-tide there are 15 feet over this shoal. Anchor when the east end of Inishvakiny Island bears E.N.E., and the old fort on Inishmaan Island is open of the east side of the entry, in 3 and  $3\frac{1}{2}$  fathoms.

West of the entrance of Greatman's Bay, about  $\frac{1}{2}$  a mile from the middle part of Garomna Island, lies *Englishman's Rock*, dry at three-quarters' ebb. Keep Gulin Head in sight by Live Island, and you will go to the southward of it; and in sailing eastward, you will have passed it, when you open a sandy patch on the east side of Greatman's Bay.

On the south side of Lettermullen Island,  $\frac{1}{2}$  a mile from shore, is another *rock*, which dries at half-ebb. Keep, therefore, more than that distance south of the island, and you will avoid it.

On the south side of Gulin Head, about a cable's length from the shore, is a small *rock*, dry at half-ebb. N.W. of Gulin Head is Carikelra Island,  $\frac{1}{2}$  a mile S.S.E. of which is *Bullig Rock*, having 9 feet water over it; and about  $\frac{1}{2}$  of a mile E.N.E. from Bullig is a little *rock*, always above water. Gulin Head, on or out to the southward of this little rock, leads you clear on the south side of the Bullig.

From Gulin Head to the Black Rock, it is high water, full and change, on the shore, at  $\frac{1}{4}$  past 4; at Nimmo's Pier, Galway, it flows until 4h. 30m.; ordinary spring-tides rise 12 feet, neap-tides 6 and 7 feet. The flood sets in from the west, and does not run above a mile an hour, except in narrow channels.

From hence, along the coast northward, the *islands*, *rocks*, and *shoals* are numerous, both within the harbours and at some distance from the land.

North-westward, about  $1\frac{1}{2}$  mile from Carikelra Island, are Carrickmachin Islands, three in number. About  $\frac{1}{2}$  a mile north of these is a *rock*, which dries at spring-tides only. At the south end of these isles is a *shoal*, easily perceived by the breakers over it; and nearly  $\frac{1}{2}$  a mile eastward is a small *rock*, the top of which is always above water.

**THE SKIRDS.**—North-westerly from the Carrickmachin are the *Skird Rocks*. They lie about 5 miles W.S.W. from Cruanakarra Island, and are the most remarkable rocks on this part of the coast, serving as a guide to point out the neighbouring harbours, several of them being above water, the westernmost large and most remarkable. The eastern part of them consists of one rock, drying about half-tide; another drying with spring-tides only; and two shoals, discoverable by the breakers only.

About  $1\frac{1}{2}$  mile S.W. by W. from Cruanakarra Island lies a small *shoal*, called *Ton-yall*, the least water over which is 7 feet. To avoid it on the east side, bring Cruanakarra Island on with Mount Cashel. To avoid it on the west side, keep Mount Cashel open to the west of Cruanakarra.

From Gulin Head to Cruanakarra Island is about 9 miles north-westward. Between are the channels into Casheen and Kilkerran Bays.

**CASHEEN.**—In Casheen Bay the ground on the east side of Dynish Island is good, being sufficiently sheltered, and having water enough for any ship. Observe, there is a *shoal*, lying S.W. from Dynish, about  $\frac{1}{2}$  a mile, having 8 feet water over it. Large ships must be careful to avoid it. Anchor on the east side of Dynish, the white sand

near the point of that island bearing west, about 2 cables' length from the shore, in 5 or 6 fathoms water.

**KILKERRAN BAY** lies to the north-eastward of Casheen. In it will be found good anchorage for ships of any burthen, a cable's length or more from the east side of Kilkerran Point; when that point just bears on with Gulin Head, you will have 6 and 7 fathoms. Sail in on either side of Ilanbonna Island, but give it a berth of a cable's length. Avoid a *bank*, lying along the coast, eastward of Ardmore Point, by steering from Ilanbonna directly towards Kilkerran Point; or sail between it and the little island about a mile west of it, so as to avoid a small *rock*, dry at half-ebb. This lies near the rocks on the starboard hand, which are always above water.

**BERTERBUI BAY** is to the northward of the Skirds, and capable of containing and sheltering the largest ships. In sailing into this harbour, avoid the *Tonyall Shoal*, which has been already described, and also a *rock*, about  $\frac{1}{2}$  a mile from Masa Point. There is another, called the *Smith's Rock*, which lies about  $\frac{1}{2}$  of a mile N.W. from Fruhlan Island, with 10 feet water on it, which you must be careful to steer clear of. To avoid the spring-tide rock off Masa Point, bring Cashell Hill open of the point, and you will sail to the westward of it. Smith's Rock is small, and lies N.N.W. from the south end of Fruhlan Island. To avoid it on the east side, keep about a cable's length from Fruhlan, or bring the east end of Inishtreh Island on with, or a little open of, the top of Cashell Hill. To avoid it on the west side, keep the middle between Inishlakín and Fruhlan Island; and when you get the west end of Inishlakín to bear on with the lower part of the west end of Urrisbeg Hill, you will be abreast of it. Vessels may ride on the east side of Ilanochly, in from 4 to 8 fathoms, good ground, or anywhere near the middle of the bay above that. The shallow parts of the bay are the *Oyster Bank* at the north end, and *Oazy Flat* along the south side, extending about 2 cables' length from shore. These you will avoid, there being not more than 1 fathom over them at low water, spring-tides.

**ROUNDSTONE BAY.**—Having passed Smith's Rock, you will see an opening to the eastward of Inishlakín Island, which leads to Roundstone Bay. This is fit only for small vessels, which ride safe in a bight, a little above the Storehouse,  $\frac{1}{2}$  a cable's length from shore, in 7 or 8 feet water; or else aground, a little farther from the shore, on mud, without any damage. Large vessels that do not take the ground, may ride, in summer-time, a little above the southernmost point of Inishnee Island, in 4 or 5 fathoms. Sailing into Roundstone Bay, you must avoid a small *rock*, drying at spring-tides, and lying E.N.E. from the northern point of Inishlakín Island, distant about  $\frac{1}{2}$  of a mile.

W.S.W. from Gourteen Point, about a mile, is *Carigoulty Rock*, covered at high water only. Above  $\frac{1}{2}$  a mile east from the north end of the two Ilanacruach Islands is a small *rock*, drying with spring-ebbs. This lies nearer to Ilanacruach than to Inishlakín, and bears N.E. by N. from the sound between the islands.

The *Bellows Rock* lies about  $2\frac{1}{2}$  miles from Cruanakilty Island, bearing W.N.W. It dries at low water, and may always be known by the sea breaking over it. About  $1\frac{1}{2}$  mile eastward of the Bellows is a small *shoal*, over which the sea breaks. Between the Bellows and Murvey Point is *Carrigmurvy Rock*, always above water; and near the south side is a small *rock*, drying at low water.

The coast from hence to Slyne Head is encumbered with many *rocks*, too numerous to describe. We shall mention only the *Carrickaskilty Rock*, which is the southernmost of all, and lies farthest from the land. This is about a mile from Ilanora Island, and is covered at high water, with spring-tides only. These may all be avoided by keeping at a league's distance from the coast.

**BUNOW BAY.**—This is a place where, in summer-time, or in moderate weather, small vessels sometimes ride, on the east side of the west point of which, nearly a cable's length from the shore, you will have 2 and  $2\frac{1}{2}$  fathoms, the ground holding well. In sailing into this anchorage, steer between Carrickaskilty Rock and Carrikirk Island, giving the island a berth, to avoid a *shoal*, on which the sea sometimes breaks; this shoal lies about 2 cables' length northward of the rock above water, near Carrikirk: and keep about a cable's length from the three rocks above water, that lie between Ilanora and Fox Island. Avoid also a small *rock*, lying about a cable's length south

of the west point of the bay, which dries with spring-tides only. Shut in Carrickaskilly Rock with the west point of the bay, and anchor.

**SLYNE HEAD.**—Two lighthouses have been erected on Illaan Imul, the most western of the chain of rocky islets forming Slyne Head, bearing from each other N. by E. and S. by W., distant asunder 415 feet. When they are kept in a line, they lead outside of all rocks between Galway Bay and Clew Bay. The northern, a revolving light, having one red and two bright faces, may be seen all round, and will make a total revolution in 6 minutes, or 2 minutes to each face. The southern, a fixed bright light, will be illuminated seaward, from S.E.  $\frac{3}{4}$  E. to E. by N. The towers are circular, and coloured white. The lantern of the northern lighthouse is elevated 112 feet above the mean level of the sea, and the southern one 104 feet. They are visible, in clear weather, at the distance of 14 and 16 miles.

From Slyne Head, the direct course and distance to Loop Head are S. by W.  $\frac{1}{4}$  W., 52 miles; and when 5 miles westward of Slyne Head, a S.W.  $\frac{1}{4}$  S. course, 80 miles, will take you near the Foze Rock, westward of the Blaskets. A N.N.E.  $\frac{1}{4}$  E. course, 40 miles from Slyne Head, will lead clear of the Black Rocks, which lie to the northward of Achill Head.

**ARDBEAR HARBOUR.**—Having rounded Slyne Head and the lighthouses, you will see Ardbear Harbour to the eastward. At its entrance are many *rocks* and *shoals*. To sail in, coming from the southward, steer for the lighthouses N.E., or N.E. by E., until you are within a league of Crua Island, which makes as a remarkable conical hill. You will then see *Carrigarone Rocks*, on the south side of Tarburt Island, and always above water. Steer toward them, and leave them on your port or larboard hand, at the distance of from a cable's length to  $\frac{1}{2}$  a mile; then steer eastward for the south side of Ardmore Cliff Head, until you open the entrance to Ardbear. Sail in through the middle. To the southward of Ardmore Head are several *rocks* and *shoals*, which you must keep clear of; they lie directly before the entrance to Mannin Bay, and almost block up its channel. W.N.W., about  $\frac{1}{2}$  a mile from the clay cliff, on the east side of the entrance to Ardbear, lies the *Dulick*, one of the above rocks, the east end of which is covered only with spring-tides, and therefore may always be perceived, either dry, or by the breakers over it. The west and N.W. parts of it dry at half-ebb, and may be avoided by keeping about a cable's length from its eastern end. On the north side, just within the narrow entry to the harbour, is a *sand bank*, stretching south-easterly about a cable's length, having 3 feet over it at low water. You will avoid it by keeping near the south side. The harbour is well sheltered, the ground good, and the water in the anchorage sufficient for the largest ships; but in the entrance there are not more than 2  $\frac{1}{2}$  fathoms with low spring-ebbs, so that a large ship will not be able to go in at that time. The anchorage is about  $\frac{1}{4}$  of a mile eastward of the entrance, above a cable's length from the south side, in 6 or 7 fathoms water, or a little higher up, in 5 fathoms. The flood-tide sets in from the southward; and off the coast, runs not above 1  $\frac{1}{2}$  mile an hour. Spring-tides rise 12 feet, neaps 6 or 7; and from South Arran to Claggen Bay, it is high water, full and change, at  $\frac{1}{2}$ -past 4.

On the north side of Crua Island is a *rock*, about a cable's length from shore, drying at half-ebb. Near the south end of High Island, which lies N. by W.  $\frac{1}{4}$  W., distant 2 miles from Crua Island, there is also a remarkable *rock*, above water, along the east side of which a *shoal* extends north and south, about  $\frac{1}{4}$  of a mile, over which, in blowing weather, a rough sea constantly breaks; yet it is supposed to have sufficient water over it; however, you will avoid it by keeping at the distance of  $\frac{1}{2}$  a mile from the S.E. point of the island.

To the eastward of High Island is the Friar, near the north end of which is a *shoal*, about a cable's length from shore, over which, in tempestuous weather, the sea always breaks. On the east side of the Friar there is also a small *rock*, drying at half-ebb and lying  $\frac{1}{4}$  of a mile from the island. About a mile east from the Friar lies the *Cudda Rock*, always above water. On each side of the Cudda is a *rock*, about a cable's length distant, which dries at half-ebb. East of this is *Furrunach Rock*, always above water; and between it and Ruilan Point are *two rocks*, which dry with spring-tides only. There is also a *shoal*, lying about 2 cables' length N. by W. from Ruilan Point, on which, at low water, are only 3 feet. You will avoid it, on the north side, by keeping *Furrunach Rock* open of the south end of Friar Island; and on the east side, by bringing the *sandy cliffs*, near Ruilan, to bear south.

**CLAGGAN BAY.**—We now approach Claggan Bay, the access to which is easy, the ground, mid-channel, clean and good, and the shelter tolerable, having depth sufficient for any ship. In sailing in, avoid the *shoal* that lies  $\frac{1}{4}$  of a mile from Ruilan Point, as before described, and anchor half-way up the bay, rather nearer to the eastern than to the western side, and you will have from  $3\frac{1}{2}$  to 6 fathoms at low water. About  $\frac{3}{4}$  from Claggan Point, and  $\frac{1}{2}$  from Lyin Island, lies *Carrickmahoga Rock*, dry at 4 hours' ebb. To avoid it on the south and east sides, bring Liahi Rock on with Ruinaha Hill. This is of a conical form, and, at a distance, looks like an island. About a cable's length from the S.E. point of Lyin Island is a *rock*, drying at half-ebb.

**INISHBOFIN.**—N.W. of Lyin Island is Inishbofin, about  $3\frac{1}{2}$  miles in length, and 2 in breadth. It lies about  $2\frac{3}{4}$  miles to the northward of Ruilan Point, and has, on its south side, a harbour, well sheltered, and the ground good, but not fit for vessels drawing more than 10 feet water. Near the middle of the entrance is a *spring-tide rock*, to the westward of the Gun Rock, which is remarkable. Keep nearer to the east than to the west of the entry, and you will avoid it. This rock, and *three shoals* near it, on each of which are 3 feet at low water, make it unsafe for those who are not well acquainted with this part. If, however, a ship is under the necessity of going in about low water, she must keep nearly a ship's length from the west end of Gun Rock, until she has passed it; she will then avoid one of these shoals, which lies 30 fathoms N.W. by W. from the N.W. point of Gun Rock. Another of these shoals lies  $\frac{1}{2}$  a cable's length W. by S. from the west point of Gun Rock. The third lies about  $\frac{1}{2}$  a cable S.W. from the rock in the middle, which dries with spring-tides. On the south side of the Gun Rocks, where they are low, about  $\frac{1}{2}$  a cable off, lies a *shoal*, on which are but 8 feet water. There is a *spit of sand* within this harbour, extending from the north side about  $\frac{1}{2}$  over, between the extremity of which and the west side of Sandy Bay, next Fort Island, the water is deepest, and the best anchorage in 2 or  $2\frac{1}{2}$  fathoms.

**INISHARK.**—To the westward of Inishbofin is Inishark. On the east side of the channel between them the water is all shallow: the sea breaks over the rocks and shoals in the fairest weather. The Inishark side is sufficiently deep, but there commonly is a great swell of the sea; and, on the south side of Inishark, between the bay and the small islands, are several *shoals*, the sea breaking over them.

To the eastward of Inishbofin is Davillaan, about a cable's length from the east end of which is a *rock*, dry at half-ebb.

**BALLINAKILL HARBOUR.**—S.S.E., distant about 5 miles from Davillaan Island, is the entrance to Ballinakill Harbour. The starboard shore is free from rocks; but, on the port or larboard side, off Inishbruin Island, is a *rock*, which dries at half-ebb. It lies about  $\frac{1}{2}$  a mile west of the island. Ilananime Island, which is north of Inishbruin, is shallow about a cable's length all round.

Ballinakill Harbour is well sheltered, the bottom good, and the water deep. The entrance is along the north side of Fruchilan Island, and the anchorage is near its eastern end, or else S.E. of the two small islands, or rocks, of Carrigahaglassa, or else eastward of the Point of Ross. In sailing into this harbour, be careful to avoid a small *rock*, lying about a cable's length N.W. from the west end of Fruchilan, which dries at half-ebb; also a *rock*, lying about  $\frac{1}{2}$  a cable's length westward of the west end of Bradilan, which dries at low water. This will be done by keeping within a cable's length of Fruchilan. You will also shun a *spring-tide rock*, called *Carricknalunga*, lying  $\frac{1}{2}$  of a mile to the eastward of Fruchilan, and abreast of a remarkable cliff on the north side of the entrance. To avoid it on the south side, bring the Black Rock, next Bradilan Island, open a sail's breadth of the north end of Davillaan Island. The anchorage near the east end of Fruchilan, is when the north point of that island bears on with the highest part of Inishbruin, and the south point of it just shutting in with Carrigeun Island, distant about  $1\frac{1}{2}$  cable from Fruchilan. This last place is fittest for large ships; and you will have 8 or 9 fathoms water. The anchorage near Carrigahaglassa Island is when the westernmost of the two bears N.W. by N., and Ross Point S. by W. Eastward from this anchorage, nearly 2 cables' length, are some *rocks*, partly dry at half-tide and partly at low water.

To anchor on the east side of Ross Point, bring the western of the two islands to bear on with the point, a cable's length from the shore; then drop anchor, and you will have from 6 to 7 fathoms water. Do not ride with more than  $\frac{1}{2}$  a cable, for the channel is narrow, and the stream runs about 2 miles an hour.

A *sandy shoal* extends a cable's length northward along the north side of the Point of Ross, and  $\frac{1}{2}$  a cable eastward along the east side of it. To avoid this, keep the north end of Inishbofin out two ships' length by the north end of Fruchilan, or get the south end of Davillaun Island just shut in by the south end of the western Carrigahglassa Rock.

Eastward of Inishbruin is Ilandachreen Island. Between these are *two rocks* under water; but they are near the shore, and out of the way of being dangerous. Between Ilandachreen and Cuddu Rocks, which lie at the entrance of Killery Harbour, is a small *rock*, dry only with extraordinary low tides; it lies about  $\frac{3}{4}$  of a mile N.E. from Ilandachreen.

To sail between these islands and the above rock, keep always within 2 cables' length of the islands on either side.

To sail on the north side of this rock, keep about  $\frac{1}{2}$  of the north end of Davillaun on with the northernmost hill of Inishbofin, which appears the highest. You are to the eastward of this rock when the east end of Ilandachreen bears on the top of Rinveel Hill.

Frechill is a small island, lying about  $1\frac{1}{2}$  mile N.N.E. from Cuddu Rocks. It is nearly surrounded by *rocks*, some of which lie above  $\frac{1}{2}$  a mile from it on the western side, and partly dry with spring-tides, and partly about half-ebb, three of the eastern ones being always above water. These rocks must be avoided on the north side, by keeping about a mile from Frechill, or by bringing Inishbruin Island on with the sharp top of Claggan Hill.

**KILLERY HARBOUR** is capacious, and fit for any ships, having good anchorage in every part; the widest part, and most moderate depth, is 2 miles up the harbour. The rocks to be avoided are, the *spring-tide rock* between Ilandachreen and Cuddu (already described), and a *rock* half-way between Ilandachreen and the mouth of the Killery: this dries with spring-tides only. It lies nearly  $\frac{1}{2}$  a mile north of a rock above water, and may be avoided by keeping Ilandachreen either west or W. by N.

Opposite to Killery Harbour are three islands. At the east end of the largest, called Inishturk Island, is a kind of bay, where a vessel may stop, in 5 or 6 fathoms water, and ride sheltered from north and westerly winds.

**CLARE ISLAND** lies in the middle of the entrance to Newport Bay: it is 4 miles in length and 2 miles in breadth, and has a lighthouse on its N.E. point, the lantern of which is elevated 487 feet above the level of the sea, and bears a fixed light, showing from east, seaward, to S.E., and visible, in clear weather, at the distance of 10 leagues. Ships from the southward should stand to the northward of Inishark Island, until the northern promontory of Clare Island is brought to bear east by compass, at which time the light will be discovered.

At the east end of Clare Island, in the bay by the castle, a vessel may stop a tide, on clean sand, in 4 fathoms water. Drop anchor when the castle bears W.  $\frac{1}{2}$  N., and the cliff next the castle S.W. by W., about  $\frac{1}{2}$  a cable's length from that point: also, in moderate weather, a vessel may stop in the bay, at the S.E. side, about  $\frac{1}{2}$  a mile from shore, in 12 and 14 fathoms.

Sailing from Killery Harbour towards Clare Island, you will pass several *rocks*: these lie along the coast, some at the distance of  $\frac{1}{2}$  of a mile from shore; part of them are dry with spring-tides, and part at half-ebb; keep therefore a mile or more from shore, and you will avoid them all: but about a mile W. by N. from Ruinaha Point, or rather  $\frac{1}{2}$  from that point and  $\frac{3}{4}$  from Clare Island, lies a *rock*, drying with spring-tides only: this you will avoid, by sailing nearer to Clare Island than to Ruinaha Point. Westward of this point is a *ledge*, running out a cable's length; and two small *rocks* at the north side of it.

Between Cahir and Clare Islands, about midway, is a small *rock* above water, named *Mula*, to the eastward of which is a *rock* under water; and about  $\frac{1}{2}$  a mile E. by N. from the N.E. point of Clare, is a small *rock*, dry at half-ebb, known by the breakers over it at high water. In navigating these parts, all these rocks will require the mariner's particular attention.

**NEWPORT, or CLEW BAY**, is a spacious arm of the sea, within which the stream of tide runs commonly about a mile an hour. In this bay are several places where vessels may ride, well sheltered, on good ground, and sufficient water. In sailing along the  
[S., W., & N. COA. OF IRE.]

southern shore, you will meet with the *Carrikadillish Rocks*. These lie west of Dour-insha Island, and are about a mile from the shore: the largest dries before half-ebb; another dries with spring-tides only; and near them are several *shoals*, which you will readily perceive by the breakers.

**INISHGORT LIGHT.**—Here, on an island named Inishgort, situated about 4 miles from Westport, and nearly the same distance from the town of Newport, is a lighthouse, bearing a fixed and bright light; it has a white appearance. The lantern is 36 feet above the level of the sea at high water, and may be seen from the S.S.E., seaward, to N.N.E., full 10 miles off. This is a very useful light, and serves as a guide to direct the mariner among the islands that front Westport and Newport Harbour.

**INISHGOULA HARBOUR** is on the east side of the island of the same name. Between it and Inishturk Island a vessel may anchor anywhere, in from 3 to 8 fathoms, good ground. A large ship coming in here requires half-flood, because about a mile west of Inishu Island some parts are shallow, having only 2 and  $2\frac{1}{2}$  fathoms at low water. Sail in along the north side of Inishu and Inishgoula, and keep within a cable's length of the latter, to avoid a *rock*, covered only at high water: it lies near the small island next north of Inishgoula. The entrance to this harbour may be discerned several miles off, by the appearance and situation of Inishu Island; for it lies near the middle of the bay, and on the north side of the largest opening between all the islands. Its western end rises higher than any other island, and is a remarkable clay cliff; this, therefore, must be considered the safest harbour for strangers to enter.

Ilanmore Harbour is 2 miles south of Inishu: this also is well sheltered, having 5 fathoms water within, and good holding ground on its southern side. The narrow beach which shelters the western side is always above water, except a small part in the middle, which is covered only at high water. The channel in is along this beach, keeping within a cable's length of it, to avoid a *shoal*, on which is only 1 fathom. This lies about  $\frac{1}{2}$  of a mile westward of the south end of the beach.

Inishlyre Harbour is about  $\frac{3}{4}$  of a mile to the eastward of Ilanmore, on the eastern side of Inishlyre Island: this is also well sheltered, and has good anchorage; but the depth cannot be more than  $2\frac{1}{2}$  or 3 fathoms at low water. The channel is the same as into Ilanmore, about a cable's length from the beach. You will anchor off the north point of the bay when it bears W. by N., about  $1\frac{1}{2}$  cable's length, in 3 fathoms water.

**ROY ISLAND HARBOUR** is on the east side of the island of that name, being a small bight, where the sea is broken off, the ground good, and water sufficient for any ship. In sailing toward any of these harbours, you should first make Roy Island: this will easily be known by two turrets upon it, which serve as land-marks to avoid the *Larban Rock*. This rock lies about a mile west of Roy Island, and dries with spring-tides only. It will be avoided, both on the north and south sides, by keeping these turrets a little open of each other.

There is a *shoal* lying about a cable's length W. by S. from the western end of Roy Island, on which are 2 fathoms at low water. This will be avoided by keeping about 2 cables' length from the western end of the island. About  $\frac{1}{2}$  a mile S.E. by S. from the east end of Roy Island is another *shoal*, on which is 1 fathom at low water; also a *rock*, about  $\frac{1}{4}$  of a mile S. by E. of that shoal, dry with spring-tides only. Eastward of this last rock, above  $\frac{1}{2}$  a mile, is a *rock* which dries at half-ebb; and another, about  $\frac{1}{2}$  a mile S.E. from it, dry with spring-tides only.

**ROSS TRUNK HARBOUR** is about 3 miles east of Roy Island, well sheltered, and fit for a number of vessels; but they must not draw above 10 feet water. The channel to this harbour is on the south side of the Larban Rock, about a cable's length from the south side of Roy Island, and thence nearly east between a straight row of islands which you see before you.

Southward of Ross Trunk Harbour is a place well sheltered, good ground, and capable of containing a number of the largest ships, with a depth of water from 2 to 6 fathoms. The passage in is along the south sides of Larban Rock, Roy Island, and the island next south of Ross Trunk. Small vessels may go up to the quay at Newport after half-flood; and though they may take the ground in their way, they will not receive any damage, for the bottom is soft mud. All this end of the bay is studded

with islands and channels, too numerous to describe, but which the new light is calculated to enable the mariner to navigate with safety.

Following the northern shore of Newport Bay to the westward, you will come to Achillbeg Island, which lies at the north point of its entrance, and about 3 miles north-eastward of the lighthouse on Clare Island. Between Achillbeg and Achill Island is a channel, called Achill Hole. Here a vessel drawing 10 or 12 feet water may ride safe in all weathers, dropping one anchor nearer to Achillbeg Island, in the edge of the stream, when the top of Cruach Patrick Mountain comes on with the extremity of Coraan Point; and laying the other north-westward, on the edge of the sand which dries at low water. There is a *rocky shoal* running southward, nearly  $\frac{1}{2}$  a mile from the Point of Coraan, next Achillbeg, the least water over which is 6 feet. The channel in is between this hole and Achillbeg. It may always be discerned by the water breaking over it, especially with west and S.W. winds. Sailing into this harbour, it is necessary to take half-flood, for the stream does not set in until  $1\frac{1}{2}$  hour after low water on the shore. Keep about a cable's length from the east side of Achillbeg, to avoid the shoal before mentioned, until you arrive at the narrow entry. Sail nearer to the Point of Coraan than to the Point of Achillbeg, to avoid a *spring-tide rock*, which lies nearest Achillbeg, and anchor as before directed. At the anchorage the stream of tide runs nearly 3 miles an hour.

From Achillbeg to Achill Head the bearing and distance are N.N.W.  $\frac{3}{4}$  W., about 12 miles; and from Inishark to the latter N.E.  $\frac{3}{4}$  N., 22 miles.

Sailing onward from Achillbeg towards Achill Head, you will meet with no danger except the *Dusaghty Rock*, which lies rather more than  $\frac{1}{2}$  a mile from Moytog Head, and dries at half-ebb. N.W.  $\frac{3}{4}$  N., 8 miles from the lighthouse on Clare Island, and south, nearly 6 miles from Achill Head, is *Bills Rock*, always above water.

Between Sline and Achill Head it is high water at half-past 4, full and change; spring-tides rise 12 feet, neaps 6 and 7. The flood-tide sets along the coast northward, the ebb southward. In Achill Sound the flood sets in both at the north and south entries at the same time, and meets a little south of the Old Salt Pans. In these entries it runs 4 miles an hour; but along the coast only 2; and in the channel between Clare and Ruinaha Point, only a mile when strongest.

## FROM ACHILL HEAD TO KILLALA, SLIGO, AND DONNEGAL BAY.

FROM Achill Head to Saddle Head the bearing and distance are N.E. by E.  $\frac{1}{4}$  E., 3 miles. Close to Achill Head is a small *rock* above water; and farther from shore is another, always to be seen, called the *Stack*, or *Roogill*. Sail to the westward of both, and you will enter safely.

**BLACK SOD BAY** is a place of tolerable shelter and clean ground, with water sufficient for any ship; but the bottom, being hard sand, does not hold well in gales from the west or S.W. quarters, these winds causing a great swell. The best anchorage is on the west side of the bay,  $\frac{1}{4}$  of a mile southward of Barnach Island, in  $2\frac{1}{2}$  or 2 fathoms: large ships must lie farther off, in  $4\frac{1}{2}$  or 5 fathoms.

There is good anchorage also on the north side of the peninsula of Claggan, not so much exposed as in the open bay; but a vessel drawing 10 or 12 feet must wait until half-flood, for off the west side of Claggan are not more than 9 feet at low water; and the rocks at the north side of the anchorage dry at half-ebb.

To sail to this anchorage, bring the Old Court House a ship's length or two outside of the Point of Claggan, until Tristy Hill comes on with the middle of the low sandy point of Claggan; then anchor, in  $4\frac{1}{2}$  or 5 fathoms, above a cable's length from the shore.

**TULLAGHAN BAY.**—To the southward of Black Sod Bay there is also a harbour, but fit for small vessels only, and these must go in with the latter part of flood. It is called Tullaghan Bay, and dries  $\frac{1}{2}$  over from the eastern side at low water. On



the edge of the sand the sea breaks almost constantly. Near the middle of the channel, a mile up, is a *spring-tide rock*; and on the west side of the channel *two rocky ledges* run out a cable's length from the shore.

A small vessel may ride off the Point of Tullaghanbaan, about a cable's length from the shore, in 10 or 12 feet water; but the best part of the harbour is near the Point of Tullaghanduh, where there are 6 feet at low water. The ground is soft; there is no swell of the sea, and a vessel will not receive any damage by touching the bottom.

Westward of Black Sod Point are some islands: the outermost is called Davillaun Island, to the northward of which are the Islands of Inishkea; and to the westward of Davillaun are the *Black Rocks*: these are high, always above water, and serve as a guide to point out this part of the coast. The easternmost Black Rock lies 6 miles to the northward of Achill Head; and from it the S.W. end of South Inishkea bears east, distant  $3\frac{1}{2}$  miles. Davillaun Island is about 5 miles to the eastward of the Black Rock, and is more than  $\frac{1}{2}$  a mile in length: it lies about  $2\frac{1}{2}$  miles S.S.E. from South Inishkea, and about the same distance W.N.W.  $\frac{1}{2}$  W. from Nackill, which is the western part of Black Sod Point. There are several islands and *rocks* between Davillaun Island and Nackill.

South Inishkea is  $1\frac{1}{2}$  mile in length, N.E. and S.W., and about a mile in breadth, with a few *rocks* at its S.W. end. A *ledge of rocks* stretches nearly a mile from the S.E. end of North Inishkea, the extremity of which dries at low water, and its middle at half-ebb. There are also some *rocks* above water, extending  $1\frac{1}{2}$  mile north-eastward from its N.E. end, with some *sunken rocks* near them.

At 5 miles north-easterly from North Inishkea, and  $1\frac{1}{2}$  mile S.W. by W. from the N.W. end of Annagh Head, is Inishglore. At  $\frac{1}{2}$  a mile S.S.W. from Inishglore is Inishkeragh, another small island; between which and the shore, nearly midway, is a *half-tide rock*. About  $\frac{1}{2}$  a mile S.W. by W. from Inishglore is a *half-tide rock*; and nearly a mile to the south-westward of Inishkeragh is a *rock* always above water, called the *Duffer Rock*; to the south-westward of which, about  $\frac{1}{2}$  a mile, is another *half-tide rock*. About  $\frac{1}{2}$  a mile W.S.W. from the N.W. end of Annagh Head is a *shoal*, on which the sea often breaks.

N.N.E.  $\frac{1}{2}$  E., distant 3 miles from Annagh Island, and a little farther W.N.W.  $\frac{3}{4}$  W. from Erris Head, is Eagle Island, lying about a mile from shore; but there is no passage between.

Two *LIGHTHOUSES* are erected on Eagle Island, showing two fixed bright lights: they bear from each other E. by N. and W. by S., and when kept in a line, will lead 3 miles to seaward of the Black Rocks, and  $2\frac{1}{2}$  miles seaward of the Stages of Broadhaven. The lanterns are elevated 220 feet above the level of high water mark, and are not illuminated landward from E. by S. to S. by W.  $\frac{1}{2}$  W.

In the summer, and with moderate weather, a vessel may ride safe between the two Inishkea Islands, about  $1\frac{1}{2}$  cable from the N.E. side of South Inishkea, in 3 or 4 fathoms water. Coming to this anchorage from the south, avoid the *ledge* stretching about a cable's length from its east point; this will be done by bringing the west end of Davillaun Island on with Achill Head. The ground in this anchorage holds well.

**ERRIS HEAD** lies to the eastward of Eagle Island, and has some *rocks* about it; give it therefore a small berth, and you will enter Broadhaven Bay, which lies above 6 miles to the south-eastward of it.

From Achill Head to Broadhaven it is high water on the shore about 4h. 30m., full and change, and the stream runs about a mile an hour.

**BROADHAVEN HARBOUR** affords good anchorage, and the water is sufficiently deep for any vessel; but there is not room for more than two large ships, or four lesser ones, to ride well sheltered with northerly winds; and these must ride with not more than  $\frac{1}{2}$  a cable to the east and westward. The anchorage is between *two spits of sand*, one running from Rinitagal Head, on the west side, the other from Rinishunnach Point, on the east side. To sail to this anchorage, bring the Saltpan House, at the head of the bay, a sail's breadth open to the westward of the west end of Sleamore Hill, in Achill Island; or keep the extremity of the point next Glinigad Hill on with the sharp top of Binwi Hill, until a hut near Rinitagal Point comes on with Sleamore Hill, *in the Mullet*, bearing about N.N.W.: then, if your vessel is large, anchor; but if it

draws not more than 12 feet water, you may sail farther, until the Saltpan House bears a sail's breadth upon Sleamore Hill; or till Knockanalyna Point comes just on with Kid Island. Smaller vessels go farther than this, about half-tide, and lie very safe, on soft sand, in 3 or 4 feet water. A vessel may also stop a tide on the south side of Knockanalyna Point, in 3 fathoms, about 2 cables' length from the shore.

From Erris Head to Kid Island the bearing and distance are E.  $\frac{1}{2}$  S.,  $5\frac{1}{2}$  miles; and to the Three Tuns, or Stags of Broadhaven, east,  $8\frac{1}{2}$  miles. These Stags are high remarkable *rocks*, lying 3 miles E. by N. from Kid Island, and about a mile to the northward of the shore, serving to distinguish this part of the coast.

From the Stags of Broadhaven to Downpatrick Head, the bearing and distance are S.E.  $\frac{1}{4}$  E., 15 miles; and thence to Kinnasharragh Point it is S.E.  $\frac{1}{4}$  E., 10 miles. Between the two latter is Killala Bay. From the Stags of Broadhaven to the entrance of Sligo Bay, the course is S.E.  $\frac{3}{4}$  E., distant 40 miles; and from 2 miles north of the Stags to Rathlin O'Birne, the course is E.  $\frac{1}{2}$  S., distant 37 miles.

**KILLALA BAY.**—From the Stags of Broadhaven to Killala Bay the coast is clear of rocks or shoals, the shore being mostly steep-to. On the east side of this bay is Rathfran Harbour, fit only for small vessels, being dry at low water: it is, however, quite sheltered by the bar, safe from any swell of the sea, and vessels may take the ground without damage. At the bar, mid-channel, is a *rock*, drying with spring-ebbs; therefore, a vessel drawing 9 or 10 feet cannot go in till high water. The channel is about  $\frac{1}{2}$  a cable's length from the eastern shore. As the sea is smoother here than on the Bar of Killala, some vessels run for this harbour in preference.

In going into the Bay of Killala there are *three rocks* lying on the west side, off the Point of Ross, called the *Carrickpatrick Rocks*; the eastern one dries at 4 hours' ebb, the western one at 2 hours; and the shoal between the eastern one and Ross Point dries with extraordinary low tides only. To avoid these rocks along their N.E. sides, keep the western part of Kilcummin Head 3 or 4 ships' length out by the highest part of the head; and when Relakin Head is just appearing to open of Kilcummin Head, you will be a mile to the north-eastward of them. To clear them on the S.E. side, keep the steeple of Killala on with Inishirnaan White Point, when it will also be on with a remarkable hill, tapering at the east end, and to the westward of Nefin Hill.

The Bar of Killala has only 4 feet water over it at low spring-tides, so that a vessel drawing 10 feet must wait until the last quarter flood with spring-tides, or until high water with neap-tides. In sailing over the bar, bring the old storehouse just open of the steeple of Killala, to avoid *Carrickcashun Ledge*, which lies on the west side of the channel, and begins to dry at half-ebb. At  $\frac{1}{2}$  a mile above the bar is a *stony ledge*, south of Inishirnaan Point, the top of which is only covered with extraordinary high tides. At  $\frac{1}{2}$  a cable's length to the northward of this ledge, the channel turns S.S.E. to the anchorage: here the least water is 2 feet at low spring-tides. At that part of the channel where it turns south-eastward, Summerhill House, at Rathfran, may be seen through the sandy gap near Inishirnaan Point. In the harbour of Killala, vessels drawing 8 or 9 feet may ride, in good shelter and perfectly safe. A ship drawing 12 feet may get to the anchorage about high water; at low spring-tides she will touch the ground; but this is a clean bed of sand, without any swell to agitate the ship, and therefore it will not hurt. The deepest water is in the channel of the river, about 2 cables' length S.S.E. from the west end of Birtalach Island, when that end of it shuts on the land at the bar. Here is a small pool, having 12 feet at low water, in which a vessel may lie moored, head and stern, without touching, on either side of the channel; and even if she should touch the bottom, it being clean sand, she will not hurt.

In moderate weather vessels may anchor off the east side of Ross Point, in Killala Bay, in 5 or 6 fathoms water, at about a cable's length from shore.

The stream along this coast comes from the westward, and runs not more than a mile an hour. At Killala it is high water at 5h. 15m. on full and change days.

S.  $\frac{1}{2}$  W., distant 3 miles from Ross Point, is the *bar* of the River Moy, leading up to Ballina. The marks for the bar are, the Round Abbey open between the heads of the entrance, and Castle M'Gee on with Ross Point. The least water on it is from 3 to 5 feet.

E.S.E.  $\frac{1}{4}$  S., 6 miles from Kilcummin Head, is Kinnisharragh Point, on the east side

of Killala Bay. This point is low land, and in rough weather the sea breaks over it a full mile from the shore; therefore, in passing, give it a good berth.

**SLIGO BAY.**—From Kinnisharragh Point to Aughris Head, the bearing and distance are S.E. by E., 10 miles; from Aughris Head to Gessigo Point N.E. by E.  $\frac{1}{2}$  E.,  $5\frac{1}{2}$  miles: these two points form the entrance into Sligo Bay. On the north side of Sligo Bay, E.  $\frac{1}{2}$  N.,  $4\frac{1}{2}$  miles from Aughris Head, is Raugly Point, to the south-eastward of which a *rocky reef* extends, about  $\frac{1}{2}$  of a mile, on which is *Bird Rock*, always above water. West, about  $\frac{1}{2}$  a mile from Raugly Point, and nearly that distance from the shore, is the *Wheaten Rock*, visible only at low water, springs. S. by E.  $\frac{1}{2}$  E. from Raugly Point is the *Black Rock*, covered at high water. On this rock a lighthouse has lately been erected, bearing by compass from Kinnisharragh Point, Killala Bay, E.S.E.  $\frac{1}{2}$  S.,  $15\frac{1}{2}$  miles; from Aughris Point E. by S., 5 miles; from the Wheaten Rock S.E.  $\frac{3}{4}$  S.,  $1\frac{1}{2}$  mile; and from Haulbowling Island S.S.E.,  $3\frac{1}{2}$  miles. This is a fixed bright light, showing from S.W., seaward, to S.E. by S., and will be visible, in clear weather, at the distance of 13 miles. The lighthouse is built on part of the Black Rock Tower, and the lantern placed at the level of 74 feet over high water of spring-tides.

S.W.  $\frac{1}{2}$  S., about  $\frac{3}{4}$  of a mile from Black Rock, is the *Blind Rock*. Scarden mill open of Magin and Coney Islands, will lead upon it; and Black Rock Tower on with St. John's Port House, bearing N.E., leads close to the westward of it.

To sail into Sligo Harbour, keep above 2 cables' length to the northward of the lighthouse, in order to avoid the shoal water on the north side of the rock. To sail over the bar, on which are 8 or 9 feet water at low springs, bring Rosses South Point on with the house on Oyster Island. This mark will clear the *Bun Gar Bank*, a *shoal*, extending from Black Rock to Coney Island, over the northern side of which are from 3 to 7 feet; or, to bring the two lights on Oyster Island in one, will lead you over the bar, in the best water. In entering, the mark to avoid the Wheaten Rock on the south side, is the Black Rock Tower and King's House, at Sligo, in one. This latter mark will take you very near the Wheaten Rock; but, by bringing the Black Rock S.E., you will pass 2 cables' length to the southward of it.

Above  $\frac{1}{2}$  a mile eastward from the extremity of Point Raugly, a vessel may, in moderate weather, stop in  $2\frac{1}{2}$  fathoms, clean ground, taking care to avoid the before-mentioned reef of rocks, running out to the eastward of Raugly Point. The only place where a vessel will lie afloat at all times of the tide, is Oyster Island Harbour; but this will not do in winter-time, for the bottom is rocky, and does not hold well; and spring-tides run 3 knots. The anchorage is, however, well sheltered, and has no great sea at any time. The best place is at  $\frac{1}{2}$  a cable's length above, or eastward of, the quay, nearest the island side, in 3 fathoms at low water. If a vessel intends lying here any considerable time, or finds her anchor drag, it will be better to remove to the east side of the quay, where she may lie aground without damage.

Two **LIGHTHOUSES** have been lately built on Oyster Island, exhibiting bright fixed lights, visible from S.E.  $\frac{1}{2}$  E. to N.W. by N. They bear from each other N.N.W.  $\frac{1}{2}$  W. and S.S.E.  $\frac{1}{2}$  E., distant 496 feet. The towers are circular and white. The lantern of the northern one is elevated 43 feet, and that of the southern one 53 feet above the mean level of the sea, both being visible at 11 or 12 miles off, in clear weather. When these towers are brought in a line, they will lead over the deepest water on the bar, and clear of the Bun Gar Bank. The northern tower shut on the north part of Coney Island, will clear the Wheaten Rock.

In sailing in between Coney Island and the south point of the Upper Rosses, keep nearest the point, and leave the perch, which stands on a rock, on your starboard hand. The rock dries before half-ebb, and the water round it is sufficiently deep at a ship's length distance. Ships drawing 12 feet should wait till half-flood to sail into the harbour; for, with westerly winds, there generally is a heavy sea between Raugly Point and the south point of Upper Rosses. Vessels drawing 10 feet water may go up to Sligo Quay with spring-tides, or ground in any part of the channel, a mile beyond Oyster Island, without receiving damage.

In Sligo Bay it is high water at 5h. 52m., full and change.

**DONNEGAL BAY** lies to the northward of Sligo Bay, between Gessigo Point and Teelin Head, the latter bearing from the former N. by E.  $\frac{1}{2}$  E., 18 miles. It is a *spacious bay*, about 20 miles deep, and contains several harbours.

About a mile eastward of Gessigo Point are *two shoals*, nearly  $\frac{1}{2}$  a mile from the shore, off Artrashnish, in which the sea breaks in blowing weather; and about  $\frac{1}{4}$  a mile N.E. of these, a mile from shore, is a *half-tide rock*.

N.N.E.  $\frac{1}{2}$  E. from Gessigo Point, distant about 4 miles, is Inishmurry Island, from the western end of which a *ledge* extends westward a cable's length; and from the east end of this island runs another *ledge*, eastward, about the same distance.

At  $1\frac{1}{2}$  mile northward of the Inishmurry is *Boahinshi*, or *Bomore Rock*, always above water; but, on its eastern side, a *rocky ledge* runs out about a cable's length; and on its west side is the *Shaddon Rock*, dry at half-ebb. This latter rock is about  $\frac{1}{2}$  of a mile from Boahinsh. With the lighthouse on St. John's Point bearing east, you will pass well to the northward of these rocks.

Sailing onward toward Milk Harbour, you will see *Turgunnell Rock*. It lies about  $\frac{1}{2}$  of a mile from the shore, and a part of it is always above water.

**MILK HAVEN, or MILK HARBOUR**, lies 7 miles to the eastward of Gessigo Point, and nearly 6 miles from Inishmurry Island. It is a kind of creek, well sheltered by Dernish Island, but fit only for small vessels drawing not more than 8 or 9 feet water; and these must sail in with the last quarter of flood, for the channel is nearly dry at low spring-tides; and there are several *large stones* scattered about, which dry before low water, and will infallibly damage a ship's bottom. To sail into this harbour, take three-quarters' flood, and keep about  $\frac{1}{2}$  a mile from shore, until you see *Turcannel* and *Carricknaspanach Rocks*, which latter lies  $\frac{1}{2}$  a mile northward of Dernish Island, and directly off the mouth of the harbour, being covered with spring-tides only, and discovering itself by a rippling sea. Leave this rock on your starboard side, nearly a cable's length, and steer directly in for the east side of the point of Dernish Island, and keep  $\frac{1}{2}$  a cable's length from the island all up the channel. Anchor off the S.W. point of the island,  $\frac{1}{2}$  a cable's length from the high-water mark, where you will be safe in all weathers.

**MULLOCHMORE, or CLASSYLAUN**, is nearly 4 miles north-eastward from the entrance to Milk Haven, between which are the Hugh Islands, and is 5 miles S.S.W.  $\frac{1}{2}$  W. from St. John's Point. On this point is a lighthouse. It is a white building, bearing a bright and steady light. The lantern is 104 feet above the level of high water, and visible from E. by S., seaward, to N.E. by E., 14 miles off. At 6 miles E.S.E.  $\frac{1}{2}$  E. from Mullochmore is the entrance to Ballyshannon.

**BALLYSHANNON HARBOUR** is fit only for small vessels, having, at low water, not more than  $3\frac{1}{2}$  feet on the bar. Its access is dangerous, especially with westerly winds; for then the sea breaks from side to side, and it is difficult to discover the channel. About  $\frac{1}{4}$  of a mile up is a *rock*, on the north edge of the channel, covered at high water. The entrance is nearly N.W. of this rock. Leave this rock on your port or larboard side, about a ship's length or two; and when you are a cable's length beyond it, there is no further danger, for the water deepens to 6 and 8 feet, and is well sheltered. The customary anchorage is  $\frac{1}{2}$  of a mile below the town of Ballyshannon, in a kind of pool, where are 10, 11, and 12 feet water, making, fast to the shore to avoid the stream; but you will have 3 or 4 fathoms water at the quays of the town, where there is room for a number of vessels. The channel up is not more than a cable's length in width, although it is marked out by perches and poles. A stranger should never attempt it without a pilot; nor even with one, except the bar is smooth. In summer, vessels may safely stand in toward the bar, in order to pick up a pilot; but the surf, or other accidents, may prevent him coming off, in which case, and, perhaps, always in winter, it would be wise to proceed to Donnegal River, or Killibegs, and send over-land for a pilot, if none should happen to be at either of these places.

Ballyshannon Bar cannot be taken safely by a vessel drawing more than 8 or 9 feet, except the bar is very smooth, and at high water, spring-tides, and these only rise 10 feet; and, during the winter months, they fall too early in the morning and too late in the evening to admit of you taking the bar during day-light. It is high water, full and change, at 5h. 30m. on the bar, and at 5h. 10m. at the town quay. This is occasioned by the large quantity of water from the interior, which prevents the flood running up.

**DONNEGAL HARBOUR** is on the east side of the peninsula, called the Hassens, or Green Islands, 2 miles below the town of Donnegal, where small vessels may ride

about  $\frac{1}{2}$  a cable's length from the shore, in 2 or 3 fathoms water. The channel to this anchorage begins at the Black Rock, about  $2\frac{1}{2}$  miles below the Hassens, and may be navigated by vessels drawing 16 feet, at high water. The Black Rock is always above water, and has a small rock, about a cable's length from its south side. There is also a *spit of sand* stretching from Murvach Point to about 2 cables' length from the Black Rock, which dries gradually from high to low water, and forms the south side of the channel. To sail in, you must take half-flood. Keep  $\frac{1}{2}$  a mile from the shore, on the port or larboard, or north side, until you are near the Black Rock; then sail E.  $\frac{1}{2}$  N., until you are a cable's length past it, when you may steer directly for the Green Islands, keeping at the distance of 2 cables' length from the port or larboard shore. The town of Donnegal is situated at the mouth of the River Esk, and is in a very dilapidated state.

**INVER BAY.**—Durin Point is the east point of Inver Bay, and lies  $2\frac{1}{2}$  miles W. by N. from the entrance of Donnegal Harbour, and 6 miles E.  $\frac{1}{2}$  S. from St. John's Point. Port Harbour is a small bight, on the north side of Inver Bay, having a quay on its western side, and is capable of sheltering 2 or 3 small vessels, which draw not more than 8 feet water. The quay does not run so far out as the tide ebbs. There is a small rock, dry at 4 hours' ebb, lying about a cable's length S.S.E. from Quay Head, which must be left on the port or larboard side going in. Southward of this harbour, a fleet of ships may find a good shelter; provisions, water, and fuel are easily obtained, and a good landing in almost any weather. From St. John's Point to Muckros Point, the bearing and distance are N.N.W.  $\frac{1}{2}$  W.,  $5\frac{1}{2}$  miles; and from the latter to Carrigan Point it is N.W.  $\frac{3}{4}$  W., 3 miles.

**KILLIBEGS HARBOUR** is to the northward of St. John's Point, before the mouth of which, and N.W. by W., about  $1\frac{1}{2}$  mile from the extremity of St. John's Point, lies a rocky shoal, called *Bullochmore*, over which the least water is 6 feet. You will avoid it on the west side, by bringing Muckros Point on with the easternmost sharp top of Sleaulag Hill near Teelin Head. You will avoid it on the north side, by keeping Carrigalespy Point on with the northern remarkable hummock of Salbeen Hill; and you will avoid it on the eastern side, sailing between it and St. John's Point, by keeping the north end of the sandy bay of Fintrach shut in with Roscorkin Point.

Killibegs Harbour is one of the best harbours on the west coast of Ireland; it is well sheltered, and capable of containing large ships. The best anchorage is near the west side of the harbour, when the ruins of an old castle bear W. by N., and the east end of the town N.N.E., in  $3\frac{1}{2}$  fathoms water; but vessels that draw not above 10 feet, anchor near the town, bringing the point of the low Green Island on with Rotten Island.

When at sea you will know this harbour, by the remarkable sharp-topped appearance of Crunard Hill, which is higher than any hill in the neighbourhood; and the entrance to Killibegs is a little to the southward of this hill; but the lighthouse on St. John's Point will be the best guide.

A **LIGHTHOUSE**, coloured white, is built on the western part of Rotten Island, exhibiting a bright fixed light, elevated 67 feet above the level of the sea, visible seaward from S.W. by S. to N.E. From this lighthouse St. John's Point bears S.W., distant 3 miles; the shoalest part of Bullochmore Rock S.W. by W.  $\frac{1}{2}$  W.,  $3\frac{1}{2}$  miles; the S.E. shoulder of Drumenoo Point W.  $\frac{1}{2}$  S.; and the Harbour Rock N.E.  $\frac{1}{2}$  N. The lighthouse kept in line with, or a little open of Drumenoo Point, will lead to the westward of Bullochmore Rock, and to the eastward of all the rocks between Drumenoo and Muckros Points.

The entrance to Killibegs was very difficult to make out previous to the erection of the lighthouse on Rotten Island, in consequence of the land in the vicinity being so very dark and high. Macswines Bay, close to the eastward, was frequently mistaken for it. The two lighthouses on Rotten Island and St. John's Point have now cleared up this deception.

Besides the Bullochmore Rock (which has been already described) there are several other rocks near this harbour. About  $\frac{1}{2}$  a mile W.N.W.  $\frac{1}{2}$  W. from the north end of Inishduff Island is the *Manister Shoal*, over which are only 5 feet at low water. To avoid it on the west side, bring Muckros Point to bear N. by W. To avoid it on the south side, bring the south end of Inishduff a little open to the north of Drumenoo Point. To sail between it and Muckros, keep  $\frac{1}{2}$  a mile from the latter; or bring the

low water mark of the north end of Inishduff a ship's length open to the south of Drumenoo; you will then be 2 cables' length to the southward of it.

*Black Rock* lies N.W.  $\frac{3}{4}$  W.,  $\frac{1}{4}$  of a mile distant from Drumenoo Point, and is covered only by spring-tides. S.W. by W. from Black Rock, about 2 cables' length, is a *shoal*, on which are 9 feet at low water. It extends  $\frac{1}{2}$  a mile to the S.W., being  $\frac{1}{4}$  of a mile broad, with deep water close to it. To clear this on the south side, keep Carrigan Point open of Muckros Point; and you will be to the eastward of it when the highest top of Crunard Hill comes open to the eastward of Black Rock.

Within Killibegs Harbour, on the east side,  $\frac{1}{4}$  of a mile northward of the narrowest part, there is a *rocky shoal*, above a cable's length from the shore, on the shallowest part of which are 7 feet water. In turning in or out of this harbour, you will go to the southward of this shoal when the church is opened to the southward of Rotten Island; and you will go to the northward of it when the church comes open to the northward of the island. To clear it on the west side, bring a small but remarkable hummock, about  $\frac{1}{2}$  a mile from the extremity of St. John's Point, 2 ships' length open to the westward of Rotten Island. On the north side of Salbeen Bay,  $\frac{1}{2}$  a cable from the shore, and about  $\frac{1}{4}$  of a mile south of the last-mentioned shoal, is a small *rock*, drying at half-ebb.

To the eastward of Killibegs Harbour is Macswines Bay; in the cove or bight on the north side of which, vessels, in summer-time, may ride safe; or even in winter, when it does not blow particularly hard from the west or S.W. The best anchorage for large ships is off the middle of the cove, in 10 fathoms, oozy ground. In winter, anchor farther within the bight, on the west side, about a cable's length from shore, in 5 or 6 fathoms, bringing the Black Rock near the point on with the extremity of St. John's Point: there you will be sheltered from the violence of the sea with westerly winds. Farther out in this bight some parts are *rocky*; you should therefore sound before you drop your anchor. You will ride in 10 fathoms at low water.

The *Carrickfal Rocks* extend nearly  $1\frac{1}{2}$  mile from Rosstown Point, and are a dangerous mass, as some of them only make their appearance at low spring-tides. With easterly winds the sea is smooth over them, and should be carefully avoided by ships working into Donnegal Bay, as they reach within  $2\frac{1}{2}$  miles of Dorrin Point, and should not be approached within 9 fathoms at low water. With westerly winds the sea generally breaks over them.

**TEELIN HARBOUR.**—N.W.  $\frac{1}{2}$  N.,  $6\frac{1}{2}$  miles from St. John's Point, is the entrance to Teelin Harbour. This is hardly more than a creek, where a few small vessels may ride in the summer season. Vessels drawing above 10 feet water must anchor more in the open part, where they will be more exposed; for a greater swell sets in with westerly winds. It is also subject to violent squalls of wind, which come down the Slealeag Hills when it blows from the N.W. and W.N.W.; you will therefore, at those times, hardly have room to ride with more than  $\frac{1}{2}$  a cable out, and must not make any stay in winter. Small vessels anchor on the west side of the harbour,  $\frac{1}{2}$  a cable's length from the shore, in 2 and  $2\frac{1}{2}$  fathoms, with the entrance almost shut. Vessels drawing 10 feet must ride a cable's length to the northward of the west point of the entrance, in  $3\frac{1}{2}$  fathoms at low water.

Donnegal Bay may be considered one of the safest parts of the west coast of Ireland for a ship to make free with, as there are three good anchorages on the north side of the bay, viz.:—Killibegs, Donnegal, and Inver Bay. Ships bound to Ballyshannon should not run too far to leeward with a N.W. wind, but endeavour to take one of the before-mentioned anchorages, and not risk being left near the head of the bay during a long winter's night.

**TIDES.**—In Donnegal Bay it is high water at  $\frac{1}{2}$ -past 5; and at Donnegal Town quay at 6h. 26m. Spring-tides rise 12 feet, neaps 6; and the stream of flood is scarcely perceptible, except in any one of the narrow channels.

## FROM DONNEGAL BAY TO RATHLIN ISLAND.

FROM Rathlin O'Birne Island\* to the west point of Arranmore, the bearing and distance are N.E.  $\frac{3}{4}$  E., 7 leagues. Nearly 2 cables' length west from Rathlin O'Birne Island, which lies off Teelin Head, is a small *rock*, which dries at half-ebb. Rathlin O'Birne Island is about  $\frac{1}{2}$  a mile long, and about  $\frac{1}{3}$  of a mile broad. In the channel between it and Teelin Head are 20 fathoms. When sailing through, keep nearest the island, to avoid a *reef* which runs off from the main.

At 2 $\frac{1}{2}$  miles N. by E.  $\frac{1}{2}$  E. from Teelin Head lies Malinmore Head, between which is what is termed Malin Bay, presenting an iron-bound shore, without any landing-place, and cliffs 200 and 300 feet high. Rosson Point is the northern extremity of Malinmore Head. Glen Head lies 2 $\frac{1}{2}$  miles E.N.E.  $\frac{1}{2}$  E. from Rosson Point, between which is Glen Bay; and at the head of this bay is the town of Glencolumbkilly. Glen Head is not so high as the adjacent cliffs. A *rocky reef* runs off from the point  $\frac{1}{2}$  of a mile. A little to the southward of the point is a tower, standing on a high cliff. The coast, all the way from Glen Head to Longhros Beg, is high and rocky, and should not be approached too near, as ships are liable to be becalmed by the high land, at a considerable distance off, which might prove dangerous with the swell setting on the shore.

Dawrus Head is about 8 $\frac{1}{2}$  miles E. by N. of Glen Head. To the southward of it are Lochrus Beg and Lochrusmore, two small sandy inlets, fit only for small vessels, being very shallow. About 2 $\frac{1}{2}$  miles N.E.  $\frac{1}{2}$  E. from Dawrus Head is Roaninnish Island.

Roaninnish Island is 6 $\frac{1}{2}$  miles S.S.W. from the west point of Arranmore Island. About a mile N. by W.  $\frac{1}{2}$  W. from Roaninnish Point is a *shoal*, of 4 fathoms, on which the sea breaks heavily. The water is deep on the S.W. side of the island; but on the west and north sides it is bounded by *reefs* and *shoals*. There is also a *patch*, of 2 $\frac{1}{2}$  fathoms, at 1 $\frac{1}{2}$  mile to the eastward, having 7 fathoms between it and Roaninnish. On the N.W. side, detached *shoals* lie nearly  $\frac{1}{2}$  a mile off the island. In blowing weather the sea will break on all the patches with less than 9 fathoms, causing heavy breakers, dangerous in the extreme. The whole Bay of Boyleagh, from Dawrus Head to the west end of Arranmore, presents rocky and uneven soundings, on which the sea breaks with terrific violence in blowing weather; and the water has been seen to break in 9 fathoms, during a heavy ground-swell, in a perfect calm. This bay should therefore be avoided, if possible; but should a stranger find himself embayed, he might probably save the lives of his crew by getting into Church Pool. Many vessels have been, unfortunately, wrecked, by running into Guibarra, by mistake, instead of Church Pool.

The old tower (formerly a lighthouse) on Rinrawrus Point (the N.W. point of Arranmore) kept open to the N.W. of Illanaran Island, will, when seen from the southward, keep a vessel out of Boyleagh Bay, and clear of the dangers in that vicinity; and in the night, endeavour to keep out, in 30 fathoms water.

**CHURCH POOL.**—If a vessel is driven between Teelin Head and Arranmore, the place to run for with the greatest safety is Church Pool, on the S.E. side of Inishkiel Island, which may be known by its having a chapel on its eastern point. Its entrance is rather more than a mile eastward of Dunmore Head. It is a rocky island, about  $\frac{1}{2}$  a mile in length, rather low, with some ruins on the south and S.W. sides. The best anchorage is near the middle of the bay, to the eastward of the chapel, in 2 $\frac{1}{2}$  or 3 fathoms, with the south point of the island bearing W. by S.: there the ground is good, and the anchorage is tolerably sheltered by the *reef* that runs off from the east end of the island, and to which a proper berth should be given when going in. Moor with one anchor towards the east point of the island, and the other towards the shore. Sailing to this anchorage, avoid the shoals near Roaninnish, which have just been described, and also *Bulloconnel Shoal*, which is about  $\frac{3}{4}$  of a mile N.N.E. from the N.E. end of Inishkiel, with 10 feet on it at low water. This shoal may be avoided on the west side, by keeping the hill on Inish Fry a ship's length open of Cruiterman, or Crohy Head; and on the east side, by keeping the east end of Arranmore just touching Crohy.

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\* On this island a lighthouse is in course of erection.

Guibarra River, the entrance of which lies about  $1\frac{1}{2}$  mile to the eastward of Church Pool, and has, unfortunately, been sometimes mistaken for it. The bar has 6 feet on it. The channel is narrow and crooked, lying between two rocks about 100 yards apart. Inside the bar there are 2 fathoms water; but as the tide runs out 4 or 5 knots, and a heavy surf when the wind is westerly, which renders it next to impossible to enter the river, a pilot for this place is necessary in the finest weather.

Trawenagh Bay lies about 2 miles to the northward of Guibarra River, having a *bar*, of 4 feet at low water, across the entrance. Small vessels may find good anchorage within the bay, in 3 or 4 fathoms. In entering, keep midway between the two points: then keep along the south shore, until  $\frac{1}{2}$  a mile within, and anchor under shelter of the south point. Within this anchorage is a large open space of shoal water, with some parts nearly dry.

Crohy Head lies about 3 miles N.N.W. from Trawenagh Bar, and  $6\frac{1}{2}$  miles N.E. by E.  $\frac{1}{2}$  E. from Dawrus Head. The land about Crohy Head is about 800 feet high, and has a signal-tower on it: its shores are bounded by cliffs and stony beaches. A mile W.N.W. of the head is a *shoal*, of 4 fathoms; and there is also a *reef* about 2 cables' length from the shore, on which the sea breaks heavily.

Notwithstanding the numerous islands in the Rosses, Inishmacaduan, or Rutland anchorage, is the only anchorage among them where vessels can lie with safety; and this, on account of its entrance and narrow channel, is fit only for fishermen and small vessels. The best place of anchorage there, is between the north end of Inishmacaduan and Inisheu Islands, where vessels may lie aground quite safe, on clean sand; or ride in the stream, with one anchor ashore on each side, in 5 or 6 fathoms water. To sail into this harbour, wait until it is  $\frac{3}{4}$  flood, and enter along the east side of Arranmore; keep a cable's length from the west side of Eighiter, and leave a *black rock*, near the south end of that island, always above water, on your port or larboard hand; then anchor, at  $\frac{1}{2}$  or  $\frac{1}{4}$  of a mile from the rock. In the narrowest part of the anchorage spring-tides run 4 miles an hour. In sailing to this anchorage, a pilot is necessary.

**ARRANMORE, or NORTH ARRAN ISLAND**, is about 3 miles in length: it is of a triangular form, and there are a number of small islands and *rocks* to the southward and eastward of it. It had formerly a lighthouse on its N.W. part, bearing a bright fixed light; but this has been discontinued since that on Tory Island has been established. The north and west shores are high perpendicular cliffs. The S.E. side is sloping, and terminates in a sandy point, where you may land, in moderate weather. A *reef* runs off from the main as far as Inniskeragh Island, leaving only a dangerous narrow channel, of 9 feet, which can only be taken in very fine weather, and, like all the other channels in the Rosses, it requires an experienced pilot. At  $\frac{1}{4}$  of a mile from the west point of the island lies the little island of Illanaran; and on the N.W., or Rinrawrus Point, stands the old lighthouse.

Vessels may anchor on the east side of Arranmore, under the little island Calf, in Arran Road. This anchorage may be known by a white pillar which is built on the shores. The best place to anchor in is, with the middle of Calf Island about N.N.E. and the white pillar N.W.  $\frac{1}{2}$  W., in 15 or 16 feet at low water. In sailing into this anchorage you must avoid *two rocks*, lying to the eastward of Calf Island, having only 6 feet on them at low water; and, as they lie about half-way across to Eighiter Island, when going in, you will avoid them by keeping nearer to the Eighiter than the Calf, before you haul to the westward for the anchorage. When it does not blow hard from the north, this is a tolerable anchorage; but with heavy gales at N.W., all this part is rendered dangerous by the heavy breakers and surf which fill the channels, and cut off all communication between the islands.

Two cables' length S.E. by E. from Rannach Point, in Arranmore, is a *half-tide rock*, and a *rocky shoal* about  $\frac{1}{4}$  of a mile S.W. from the same point, over which, in blowing weather, the sea breaks. It is, therefore, very dangerous sailing along this coast, and by no means to be recommended.

From Crohy Head to the S.W. coast of Arranmore Island, the distance is  $3\frac{1}{4}$  miles; between which lie the Rosses, consisting of numerous islands, lying in clusters, off deep bays to the eastward. Between some of the islands there are narrow channels, with deep water; but they are studded with numerous *rocks* and *shoals*, and require an experienced pilot to navigate even a small vessel amongst them; however, there are places which afford good anchorage for small craft; but it will require a leading wind



and a favourable tide to reach them; the tide, too, frequently runs very strongly through these intricate channels. A pilot is absolutely necessary; and no directions that could be given would be of any use to a stranger.

From Tornado Point, the north point of Arranmore, to the north end of Owey, or Kay Island, the course is E. by N.  $\frac{1}{2}$  N., and distance 4 miles. Cruit Island lies on the S.E. side of Owey Island. Between Cruit Island and the main, on its east side, vessels may anchor, on clean ground, in 6 fathoms. Off the north end of the island, but more to the southward, between the island and the peninsula, it dries at low water, and is all *rocky*. Molloghderg signal-tower, a square building, stands on the main land, opposite the middle of Cruit Island.

**THE STAGS.**—About  $1\frac{1}{4}$  mile north-westward of Owey, or Kay Island, and  $8\frac{1}{2}$  miles W.  $\frac{1}{2}$  S. from Runardallach, or Farland Point, lie the Stags of Arranmore, always above water, and may be seen 8 miles off. The water all round them is deep.

**The GOLA ISLANDS** are a group lying to the south-westward of Runardallach, or Farland Point, and to the north-eastward of Owey and Cruit Islands, forming several passages and places of shelter for vessels in bad weather, or when detained by contrary winds. There are three entrances; that between Inisherer and the main is only fit for small craft. The best passage is between Inisherer and the Ballyconnel Rocks; to enter which steer in S.  $\frac{1}{2}$  W., midway between Umfin and Inishmaan Islands, and right on for Inish Shinney; and when within a cable's length of the small island to the northward of Inish Shinney, haul up west, and anchor under Gola, in 4 or 5 fathoms, taking care to avoid a *spit* running out from the S.E. end of Gola. Here you will ride land-locked.

The southern passage is between Gola and Innisfree. This channel has several *foul patches* within it; but they may be avoided by keeping near Innisfree. To sail into this channel, bring the outer points of Inisherer, Umfin, and Gola, on with each other, bearing N.E. by E., and the highest part of Inish Shinney S.E. by E.  $\frac{1}{2}$  E., then run on about a mile S.S.E.; haul round to S.E. by E., a mile, and afterwards N.E. by E. for the anchorage.

**THE BALLYCONNEL ROCKS** are several *reefs* which break off the great westerly swell, and lie to the N.N.W., north, and N.N.E. of Gola, at the distance of about a mile, partly drying at low water. The bottom hereabout is very *rocky* and uneven; and it is to be noticed that several *reefs* extend over the islands, mostly to be seen at low water, the sea generally breaking over the whole of them.

**TORY ISLAND.**—About N.E.  $\frac{1}{2}$  N., distant 7 miles from Farland Point, is the west end of Tory Island, which extends thence to the south-eastward  $2\frac{1}{2}$  miles, and is about  $\frac{1}{2}$  a mile in breadth. The N.W. point of this island lies in latitude  $55^{\circ} 17'$  north, and longitude  $8^{\circ} 15'$  west, and has a lighthouse erected upon it, on the highest part of a long shelving point, and 120 fathoms from high-water mark; the lantern is 131 feet above the customary level of the sea, the light thereof being a fixed bright light, and visible about 16 miles. It was first exhibited on the 1st of August, 1832, and will be continued from sunset to sunrise; it bears from the N.W. point of Arranmore Island N.E. by E.  $\frac{1}{2}$  E., distant 19 miles; from Horn Head, N.W., 9 miles; from Lough Swilly lighthouse, W.N.W.  $\frac{1}{2}$  N., 21 miles; from Malin Head, W. by N.  $\frac{1}{2}$  N., 30 miles; and from Innistrall lighthouse, W. by N., northerly, 36 miles. This light will be visible from seaward all round; but when passing through the Sound between Ireland and the island, it will be shut in by the southern cliffs of the island, from N.W.  $\frac{1}{2}$  W. to N.W. by N. Captain Mudge says, "the limits of the obscuration are from south  $30^{\circ}$  east to south  $50^{\circ}$  east from the light." The Ballast Office gives the lantern to be 125 feet above the level of high water, spring-tides. Captain Mudge says, "131 feet."

With southerly winds, in summer, a vessel may stop on the northern side of Tory Island, within  $\frac{1}{2}$  a mile of the shore, on clean sandy ground, with 18 and 20 fathoms water. Persons unacquainted may mistake the Island Innistrall for Tory, which is 12 leagues to the eastward of it; and by such mistake bring themselves into danger; to prevent which, observe that Tory Island, at a distance, appears as one hill, and Innistrall as two, the easternmost being the highest. The latter island has also a lighthouse on it, which will be described hereafter. But the most remarkable objects on making the land hereabout are the Muckish and Aghla Hills, the former having a flat top, and the latter a conical peak; these are on the main land, and may be seen, in *clear weather*, full 11 or 12 leagues off.

Tory Island is low and irregular, and not easily to be distinguished, when in a line with any of the high land, though it may be seen, when clear of the land, to the eastward or westward 7 leagues off; and then it appears like a cluster of rocks, changing its form with every point of the compass. When in one with Aghla Hill, it bears S.  $\frac{1}{4}$  W. You should be careful, when approaching the land, not to mistake Horn Head for Tory Island; for Horn Head has an isolated appearance from the country between it and Muckish Hill, being low land. The high black promontory of Farland Point is also remarkable, and when in a line with Aghla Hill, bears S.S.E.  $\frac{3}{4}$  E. Muckish Hill then looks like table land, sloping gradually down at each end. When the extremity of Horn Point and the east end of Tory Island are in one, they will bear S.E. It is high water, full and change, at Tory Island and in Tory Sound, at 5h. 30m. Spring-tides rise about 10 or 12 feet, and run 2 knots an hour.

At 4 miles E.  $\frac{1}{2}$  S. from Farland Point, and about 4 miles S. by W. from Tory Island, is the north end of Inishbofin Island, which is joined to the main by a *neck of sand*, over which there is not more than a foot at low water. In a small bay off the N.E. part, a vessel may stop, in 3 or 4 fathoms, about a cable's length from the shore, when the wind is south or S.W. To the N.E. are the Islands Inishdooch and Inishbeg. In approaching this anchorage, you must avoid a *small rock* on the west side of Inishdooch Island, which lies a cable's length from the middle of the island, and dries at half-ebb. A *patch* also lies about a cable's length westward of the north end of the island; likewise some *rocks* lying a cable's length eastward from the south point of it, which dry at half-ebb; and a *flat*, of 2 fathoms, runs off south-westward from the south end of Inishdooch nearly half-way over to Inishbofin. To the southward of Inishbofin is a deep bight, called Inishbofin Bay, where coasters sometimes anchor in the summer; but it is open to the north-westward. You can anchor in 6 fathoms, fine sand, with the west side of Inishbofin in one with Tory Island lighthouse. This anchorage cannot be considered a secure one at any season of the year. There are also *two reefs* running off from the S.W. and N.W. points of Inishbofin Island, which must be avoided.

**SHEEP HAVEN.**—E.  $\frac{1}{2}$  S., about 7 miles from Inishbofin Island, is Horn Point, the northern extremity of the head. In the bay, on its west side, are several *rocks* lying along the shore, which dry partly with spring-tides, and partly at half-ebb. To the westward of Horn Point the most dangerous rocks are the *Norway Rock*, which lies about  $1\frac{1}{2}$  mile W. by S.  $\frac{1}{2}$  S. from Templebraghy, or False Head, and  $\frac{3}{4}$  of a mile off shore; and the *Harding Rock*, which is within the Norway Rock, at about 2 cables' length from the land; and about half-way between the Harding and Templebraghy Head, lies the *Little Norway Rock*, a cable's length from the shore. Having passed Horn Head, you will open Sheep Haven, a place too much exposed to the north and N.E. winds, to be safe to continue long in. The best part to ride, is on the west side of the entrance in the Bay of Dunfanaghy, where the water is deep enough for the largest ship. Anchor when Catherine's Island bears west or W.N.W., about  $\frac{1}{2}$  a mile distant, in 4 or 5 fathoms, or about 3 cables' length from it, in 3 fathoms. In the depth of 6 or 7 fathoms are some *patches of foul ground*, which should be tried by the lead before your anchor is dropped. Small vessels sometimes go over the bar, which lies northward of Catherine's Island, close by the starboard shore, and is almost dry at low water, spring-tides; but as the mouth of the channel is liable to vary, a pilot will be necessary. At  $\frac{1}{2}$  a mile above Catherine's Island they may lie safe with all weathers, or ride with an anchor on shore at Black Rock, and another in the channel, in 2 fathoms. At high water, the water over the bar is 12 feet with spring, and 9 or 10 neap-tides; but in the channel, above the bar, are from 1 to 2 fathoms at low water. Black Rock is only covered at high water, spring-tides. When the wind is to the eastward of north, the best anchorage is on the east side of Sheep Haven, in the mouth of Downing Bay, at the Isthmus of Rosgull, in 3 or 4 fathoms.

The following remarks on Sheep Haven, and directions for Downing Bay, are by Captain W. Mudge, R.N.:—"SHEEP HAVEN BAY has hitherto been considered as affording no kind of shelter, and, in consequence, few vessels venture within, if they can conveniently avoid it, while many, driven there by stress of weather, have gone on shore and been lost; but had they been acquainted with Downing Bay, they might readily have been saved.

"Downing Bay lies nearly at the bottom of Sheep Haven Bay, on the east side, between two rocky points, at the termination of a long sandy beach. The northernmost of these points is called Downing, taking its name from a village situated on the south-

ern side. The other point is called Morlach. There is a clean sandy bay between them; and close under the former point is the anchorage, in from 4 to 6 fathoms water. The marks for it are, to shut in Horn Head with Downing Point, when they will be about N.W. by N. This anchorage will be 150 fathoms from it, on clean holding ground, with security from all winds.

"In running for this anchorage," continues Captain Mudge, "the course from Horn Head will be about S.E. by S., and the distance 6 miles. Great care should be taken to give a berth to the *two half-tide rocks*, lying about a cable's length N.N.W. from Downing, which may be done by keeping the Point of Horn to the westward of the bluff of Horn Head, until the Globe House, under the Hill of Granna, be open to the south of Downing Point, when a vessel may haul up for the anchorage. When the sea breaks on these two rocks, which it generally does, then they may be approached as most convenient, and there are no other dangers to be avoided.

"There is a considerable under-tow from the swell that occasionally rolls into Downing Bay, which causes a vessel to ride easily by her cable; and as the tides, of both flood and ebb, set round the bay towards the Horn, they also assist to check a vessel up to her anchor. On this account, a second anchor should be dropped to the southward, to prevent the recoil from forcing a ship over her anchor, which it might do during the occasional cessation of wind which takes place between the squalls from the N.W.

"To prove the excellence of this anchorage, the brig *Solway* remained at anchor in Downing Bay six weeks, during the heavy gales in December, 1831, from the S.S.W., west, and N.W.; and the brig *Donaldson* arrived here in January, 1832, and remained nine days, during heavy gales from the west and N.W.\*"

Sheep Haven may readily be distinguished by Horn Head, on the west side of the entrance, which has two sharp tops, like horns, on the summit of the cliff. From Horn Head to Melmore Point, the bearing and distance are E. by S.  $\frac{1}{2}$  S., about 7 miles.

Off the eastern point of the entrance to Sheep Haven are several *rocks*, above water. The outermost of them lies 2  $\frac{1}{2}$  miles W.  $\frac{1}{2}$  N. from Melmore Point, and 4  $\frac{1}{2}$  miles E.S.E.  $\frac{1}{2}$  E. from Horn Point. There is a *shoal* about 2 cables' length to the east of it, on which the sea, in blowing weather, commonly breaks. N.W.  $\frac{1}{2}$  N., distant a mile from this rock, is a *spot*, having 12 fathoms upon it, with 20 and 23 fathoms close to it; while between it and the rock there are 19, and between the rock and the shore there are 5, 8, and 10 fathoms.

About 2  $\frac{1}{2}$  miles N. by E.  $\frac{1}{2}$  E. from Melmore Point, a small *spot* shallows, called the *Limeburner*, or *Frenchman's Shoal*, on which the sea breaks with strong winds from the westward, and in calms, before a hard gale from that quarter. Captain Mudge found but 1  $\frac{1}{2}$  fathom upon it at low water; and he gives the following marks for clearing it, viz.:—to the northward, by bringing Templebragh Head just open of Horn Point, and to the eastward, by bringing Lough Salt Mountain and Melmore Tower in one. The water is deep between it and the land, and the sea upon it breaks but seldom. At night, the lights are the only guide for this dangerous rock. Tory Island light bears from it W.N.W., distant 5 leagues, and the Fannet light S.E.  $\frac{1}{2}$  E., distant 5  $\frac{1}{2}$  miles. About a mile W.N.W. from Melmore Point there are two small *half-tide rocks*, called *Carrikavrank*, or the *Inner Frenchman*; and there are *two shoals* also, one of which is  $\frac{1}{2}$  a mile N.E. by E., and the other about  $\frac{1}{2}$  of a mile N.W.  $\frac{1}{2}$  W. from Ballyorskey, or Mulroy Point, on the eastern side of Mulroy Harbour, both of which form a continuance of shoal water round the point, extending nearly  $\frac{1}{2}$  of a mile, with 12 fathoms at  $\frac{1}{2}$  of a mile outside of them. Generally, there are breakers on them; and when there is a great swell from the westward, the sea breaks violently in 10 or 12 fathoms, nearly a mile off shore, the bottom being uneven and rocky.

**MULROY HARBOUR** may be known at a distance by Troy Island, Horn Head, and Rosyull Hill. It is a bar barbour, although there is sufficient water within it for

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\* Some pilots of this place have been in the habit of boarding vessels off Dunfanaghy, and recommending the masters to anchor there; and then, as soon as they have received their pilotage, they represent Downing Bay as much safer, and induce the master to go there, by which means they obtain a second pilotage; and they have even persuaded them to get their vessels up to Ards, and thus obtain a third pilotage.

large ships. During north-easterly gales this harbour is not to be approached, as it is entirely exposed, and not affording the least shelter for the smallest vessels. The whole bay then shows one mass of foam and breakers, particularly during the ebb-tide. With the wind from W.N.W. to E.S.E., it may be safely entered; but the channel that leads into the harbour is very narrow and difficult. About a mile within the entrance, and south of Melmore Tower, are the *Bar Rocks*, which bear east and west of each other, about 120 yards apart. The eastern one is always above water, except at very high spring-tides; and the western one dries at one-third ebb. Between them is the deepest water and best channel. A small *sunken rock*, with 5 feet water over it, lies to the southward of the Bar Rocks, forming, with them, an equilateral triangle. The bar begins about 300 yards N.E. of these rocks. Near the western side of the western rock a *sand bank* begins; and runs along shore, as far as Duudoan Point, having only from 1 to 6 feet on it at low water, spring-tides. There are *three rocks* on the east side of the bay, which are only covered at high water. They lie on the edge of the flat that forms the bar. In sailing into the harbour from the eastward, take care to avoid the rocks, before described, without the entrance; and when entering, give the eastern point a berth of at least 4 cables' length, to avoid the foul ground that surrounds it.

To sail over the bar, you must pass midway between the Bar Rocks, steering about S.W., and carrying 9 feet at low water, 14 feet at high water, neap-tides, and 21 feet at high water, spring-tides. The best time for entering is with a flood-tide; for when the western Bar Rock is just awash, there will be nearly 3 fathoms on the bar. You will avoid the *sunken bar rock*, by keeping Ballyorsky point open between the two Bar Rocks, till the water deepens 6 or 7 feet, observing that  $2\frac{1}{2}$  fathoms is the general depth on the flats to the southward of the bar, up to the deep-water channel at Duudoan Narrows; and this latter channel, of  $2\frac{1}{2}$  fathoms, is very narrow, and takes its course along the sandy shores of Glinsk, as far as Duudoan Point, deepening to 5 fathoms. There is no safe anchorage in Mulroy Bay, even when within the bar, on account of the heavy swell that sets in with in-shore winds; but small vessels, in fine weather, may stop for a tide, or wait for a favourable opportunity of departing, by anchoring half-way between Duudoan Point and the Bar Rocks, just off the channel, on the Melmore side, in 2 fathoms, in order to avoid the stream of tide, which runs 4 knots, on springs. For real security, vessels must pass beyond the narrows of Duudoan, up to Lagnakillian, which is  $1\frac{1}{4}$  mile up, and the first secure anchorage, in 2 to 4 fathoms, mud. Strangers bound to Mulroy should always take a pilot.

From off Ballyorsky Point, on the east side of the entrance to Mulroy Harbour, to Fannet Point, the bearing is E.S.E.  $\frac{1}{2}$  E., and the distance about  $4\frac{1}{2}$  miles.

**LOUGH SWILLY.**—The entrance to this lough is about  $3\frac{1}{2}$  miles wide from shore to shore. Fannet is a low point at the west side of the entrance: it is distinguished by a lighthouse, which displays a fixed light, elevated 90 feet above the level of the sea, which, when seen from sea, is of a deep-red colour; but from within the lough it appears bright. It is visible within the bearings from north, round seaward, to E.S.E., at the distance of 14 miles, in clear weather. This is a capacious harbour, of easy access, and fit for vessels of any burden. The ground is clean, the depth moderate, and you may stop in any part; but the best places are off Buncranagh, about  $\frac{3}{4}$  of a mile from the shore, in from 4 to 8 fathoms, with Fannet lighthouse and Dunree Point in one, or between the Island Inch and Rathmullen (rather nearer to the latter), in from 5 to 8 fathoms. The stream runs about 3 miles an hour. In turning in or out, you will avoid the *Swilly Rocks*, lying on the west side of the entrance, about  $1\frac{1}{2}$  mile within Fannet Point,  $\frac{1}{2}$  a mile from shore, and about 2 cables' length east and S.E. from *Brown George Rock*. This rock is remarkable, always above water, and near the point of Doac Beg. The northern Swilly Rock is small, and dries at low spring-tides; the other an hour or two before low water, and may be perceived in the calmest weather by a swell over it. When these rocks are visible, you may sail within  $\frac{1}{2}$  a cable's length of the outermost.

As the entrance of Lough Swilly and Tory Island lie in an E.S.E. and W.N.W. direction, 7 leagues distant, the lough will easily be found, when coming from the westward, after getting a sight of Tory Island; although what is really the entrance of the lough does not appear so, until it bears nearly south by compass, when the lough begins to open. The hills on each side of the lough are remarkable, and may be readily known

at a distance. In approaching Lough Swilly, care must be taken to avoid the *Limeburner*, or *Frenchman's Rock*, which, as before said, lies off Melmore Point, and although always covered, sometimes is to be distinguished by its breakers. As this rock lies E.  $\frac{1}{2}$  N. from Horn Point, and Fannet Point on with the highest part of the mountains eastward of the loch, bearing S.E.  $\frac{1}{2}$  E., nearly, it will easily be avoided by keeping False Head open of Horn Point, until the lough opens; or Dunnaff Head bears S.E.  $\frac{1}{2}$  E.; or Melmore Tower is in one with Lough Salt Mount: this latter is about 10 miles inland from Melmore Point. Dunnaff Head, which forms the eastern point of the entrance to the lough, is a round ragged headland: between it and Fannet Point the ground is quite clear of danger, with good room for turning all the way up. The Swilly and the Harbour Rocks (above-mentioned) appear at low water, and lie well over on the western side, so that it is rare that breakers will not be perceived over them. There is a fort on each side of the Narrows; and your course up to them will be nearly S.S.W., about  $5\frac{1}{2}$  miles from the entrance; and from thence to Buncranagh anchorage S. by E., about 4 miles.

After passing the eastern, or Dunree Fort, which is bold, except some *rocks* a cable's length to the southward, that show at spring-ebbs, ships may stop a tide, or anchor in safety, keeping nearly in about the middle of the channel, in from 7 to 9 fathoms water, sandy ground. There are some *rocks* lying on the east side of the lough,  $1\frac{1}{2}$  mile above Dunree Fort, and off the Church of Lisfarnon: these are about  $2\frac{1}{2}$  cables' length from the shore. At  $1\frac{1}{2}$  mile farther up, on the same side, at about 4 cables' length, or nearly  $\frac{1}{2}$  a mile off shore, is a *rocky patch*, of  $7\frac{1}{2}$  feet. Both these may be avoided, by observing to keep Fannet lighthouse and Dunree Point in one; and when the straggling town of Buncranagh begins to open of the point where there is a gun and flag-staffs, you may haul round to an anchorage off Buncranagh.

To anchor on the best ground, you should haul towards Buncranagh Point, until you shut the entrance of the lough, and bring the high cliff on the west side of the entrance over Dunree Fort, and into the break between the fort and signal-post, bearing N.  $\frac{1}{2}$  W. So soon as you bring the castle to bear east, then anchor with your best bower, and moor S.W., the flood setting in that direction: here you will have 5 fathoms at low water, spring-tides; and this is the best anchorage for large ships. The bottom is mud, and shoals gradually to 4 fathoms, which will be when you are about  $\frac{1}{4}$  of a mile from the shore. Outside of this the bottom is of a hard sand, and will not hold well. S.S.W. from this anchorage is the *Carrick Cullion Rock*, which is covered at springs, distant  $1\frac{1}{2}$  mile, and appearing nearly in a line with Fahan Point. West, and somewhat to the southward of the Salt Pans, is the Flax Mill, where very good water may be obtained. Spring-tides run 2 knots, but the neap-tides are hardly perceptible.

Inch Island has a barren hill near its N.W. end; and on the south side is a boat-harbour, usually called Mill Bay, having a mill upon it, where many fishing-boats are usually drawn up.

At Buncranagh it is high water, full and change, at 6 o'clock; and the rise with spring-tides is 10 feet. At Fahan the water rises nearly 20 feet with spring-tides.

Near the entrance of Lough Swilly, and along the north coast of Ireland, at the full and change of the moon, heavy rollers frequently set in, breaking in enormous waves along the coast, and on the foul ground,  $\frac{1}{2}$  a mile from the shore, in 14 or 15 fathoms; and if a vessel should unfortunately get into them, inevitable destruction would be the consequence. Several vessels have had very narrow escapes from destruction, by running over the ground where they break.

Malin Head lies E.  $\frac{3}{4}$  N., 10 miles from Fannet Head. At  $3\frac{1}{2}$  miles to the southward of Malin Head is Lough Strabragy, a harbour unfit for large vessels, though small ones will be sheltered anywhere above Runevad Point. The channel is narrow and crooked, and the sea rough over the bar. The passage is on the west side of the bar, close along the land; but should never be attempted unless in moderate weather, and when the channel is discernible. Take flood-tide to enter. Keep midway between the breakers on the bar and the low cliffs on the starboard side; or if the channel is not distinguishable, keep 2 ships' length from the cliffs and visible rocks on the starboard side. Anchor in the middle of the channel, between Runevad Point and the meeting-house, in 2 fathoms. The stream runs 2 miles an hour. North-westward from the entrance of this lough, at  $\frac{1}{2}$  a mile from shore, is Glasheda, or Seal Island, surrounded with *rocks*.

You will now approach Malin Head; having rounded which, you will now see the Garveny Isles. These are several small islands, about  $1\frac{1}{2}$  mile from the shore. At  $\frac{1}{4}$  of a mile E.N.E. from Stanoff, which is the northern round rocky island of the Garvenys, are *Doherty's Rocks*; the east end of these dry with spring-tides, and the other parts at half-cbb. W. by S. from this rocky island, about a mile, and nearer than that to the main, is a *blind rock*, over which are 6 feet water; and near to which, in the same direction towards the shore, is a *shoal*, of 4 fathoms. Keep Glengad Head in sight over Stock-a-Rodden, bearing S.E.  $\frac{3}{4}$  S., and you will clear it, sailing between the outer Garvenys and the main. When going to the westward, as soon as the whole island of Innistrathull opens about its whole length to the westward of Stanoff, bearing E.  $\frac{1}{2}$  N., you will have passed the blind rock, and may shape a course as convenient; and in like manner when coming from the westward, bring the above marks on before the east end of Innistrathull closes with the west side of Stanoff. About  $\frac{1}{4}$  of a mile N.W.  $\frac{1}{4}$  N. from Stanoff is a *shoal*, with two small rocky heads; and about a cable's length from the southern Garveny Island is another. Glengad Head is 8 miles to the south-eastward of Malin Head.

**INNISTRATHULL ISLAND** is 6 miles E.  $\frac{1}{4}$  N. from Malin Head, 6 miles N.  $\frac{1}{2}$  E. from Glengad Head, and about 4 miles from the nearest shore. It has a lighthouse on it, in which a light is exhibited, on the revolving principle, attaining its greatest brilliancy once in every 2 minutes, during which space of time it appears brilliant for the space of 10 seconds before it is again obscured for 1 minute and 50 seconds: it is visible all round at the distance of 6 leagues, in clear weather.

On the north side of Innistrathull is a *rocky shoal*; and to the northward of it are several *rocks* above water, called the *Tarmore Rocks*, about which are from 10 to 18 fathoms; and between them and Innistrathull are 15 fathoms. About  $\frac{1}{2}$  or  $\frac{3}{4}$  of a mile S.E. from the Garvenys, vessels may stop a tide, in moderate weather, in from 5 to 9 fathoms, good sandy ground; so they may farther on, in Culluff Bay, to the southward of Glengad Head, off the mouth of the river, about  $\frac{1}{2}$  a mile from the shore, in clean sand with small shells.

From Glengad Head to Innishowen Head the course is about S.S.E.  $\frac{1}{2}$  E., and the distance  $10\frac{1}{2}$  miles. To the southward of Innishowen Head is Loch Foyle.

**INNISHOWEN LIGHTHOUSES.**—Two lighthouses have been erected on Donagree Point, about  $\frac{3}{4}$  of a mile to the S.W. of Innishowen Head, on the northern side of the entrance to Loch Foyle. They bear from each other east and west, distant 460 feet, and when kept in a line lead clear to the northward of the Tuns Bank. The lights are fixed bright lights, open to seaward from N.E.  $\frac{1}{2}$  N. to W. by S. The eastern tower bears from Bengore Head W.N.W., distant  $15\frac{1}{2}$  miles; from the north buoy of the Tuns Bank W.N.W.,  $1\frac{1}{4}$  mile; from the S.W. end of the Tuns Bank N.E.  $\frac{3}{4}$  E., 2 miles; from the Tower on Magilligan Point N.E. by E.,  $2\frac{1}{2}$  miles; and from the north point of McKenny's Bank E.N.E.,  $2\frac{1}{2}$  miles. The towers are circular, coloured white. The lanterns are elevated 84 and 94 feet above the mean level of the sea, and, in clear weather, may be seen at the distance of 13 miles. There is also a look-out house for pilots at Strove, on Innishowen Head. They generally board vessels off the Tuns Bank.

**LOUGH FEOYL, or FOYLE**, is a capacious harbour, where the largest vessels may ride in safety in all weathers. In sailing in, you must avoid the Tuns Bank, which lies on the south side of the entry, having a channel between it and the land on the north side,  $\frac{3}{4}$  of a mile broad. This bank extends about  $2\frac{1}{2}$  miles E. by N.  $\frac{1}{2}$  N. and W. by S.  $\frac{1}{2}$  S., and is nearly a mile across at its broadest part, having a buoy at the east and west ends of it. A small *patch*, near the western end of it, dries at low water; and also another small *patch*, about half-way toward its eastern end. This latter bears S.  $\frac{1}{4}$  E. from the new lighthouses on Innishowen Head, distant about a mile. With neap-tides it is sometimes not completely covered; but when under water, it may be discerned by the rippling of the sea over it, unless it is very calm indeed. These patches have been observed to diminish and increase alternately, sometimes drifting quite away, and again collecting anew; so that they may be expected, in a course of years, to appear larger and less, and dry sooner and later in the tide. The west end of the bank, nearest Magilligan Point, has but 2 or 3 feet over it at low water; the rest from 6 to 9 feet. The shore, from Innishowen Head up to Green Castle, has some *sunken rocks*, which lie near the points. Some are covered at different times of tide, others are always under water. The farthest off does not exceed 2 cables' length from shore. To sail in, take

[S., W., & N. COA. OF IRE.]

flood, or a brisk leading wind, for stemming the ebb, which runs  $3\frac{1}{2}$  miles an hour; keep the lighthouses in one, until the tower on Magilligan Point bears W.S.W.  $\frac{1}{2}$  W.; then steer right in for the entrance, keeping about  $\frac{1}{3}$  of a mile from the starboard shore, till between Green Castle and Magilligan Point; then haul up to about 3 cables' length from the north side, in order to avoid the shoal spit of Mc Kenny's Bank, on which you will observe a pole, or perch, and another nearer the shore, on the other side of the gutway, running into the bank. The best anchorage for large vessels is 3 or 4 miles above the entrance, on the north side of the bay, about  $\frac{1}{2}$  or  $\frac{3}{4}$  of a mile from the shore, in from 5 to 8 fathoms. Ships not drawing above 12 feet, will ride easiest nearly abreast of Quigley's Point, in  $2\frac{1}{2}$  and 3 fathoms; farther up, it becomes too shallow to lie afloat at low water.

The shoals to be avoided are *Red Castle Bank*, which runs from the shore at Red Castle House nearly  $\frac{1}{2}$  a mile southward, the southern edge having 1 fathom water over it, where there is a buoy, and the other parts drying gradually. Take care not to bring the tower on Magilligan Point to the southward of east, and you will avoid it. Opposite to this bank lies the eastern end of the *Great Bank*, which thence extends 5 miles to the westward, and nearly parallel to the northern side of the lough. The west end dries at half-ebb; the rest not till low water, or only with spring-tides. The west end of this bank reaches almost to Ture. The north-western side is marked by three buoys; and on the spit, off Quigley Point, is a perch. The navigable channel, between the Great Bank and the north side of the lough, is not more than  $\frac{1}{4}$  of a mile in width. We know of no leading marks throughout it; therefore, advise the mariner to keep a good look-out for the buoys, and pay attention to the lead.

*Ture Bank* extends from the S.W. end of the Great Bank,  $\frac{3}{4}$  over towards the houses of Ture. The least water on that part nearest the channel is 4 feet. About the middle of the patch there is only a foot at low water. In the channel between it and the Ture are  $1\frac{1}{2}$  and 2 fathoms. To sail through this part of the channel, keep the houses on Culmore Point S.W.  $\frac{3}{4}$  W., till nearly up with another buoy, which leave on your starboard hand; then steer more southerly, towards the round hill, next south Derry, until Derry bears over the middle of Culmore Point; then steer right for the point. Culmore Point appears low and narrow, with some houses at its northern end. These may, in clear weather, be seen from the entrance of the lough. From this point, the land rises gently towards Derry; and near Derry are several remarkable hills. Large vessels will have sufficient water, and good ground, close to the town. It is high water at Londonderry, full and change, at 6h. 30m. Spring-tides rise from 7 to 9 feet.

*The following is extracted from the Londonderry Port Regulations of 1840.*—"The east light bears from the great buoy of the Tuns, which is in 6 fathoms water, W.N.W., about  $1\frac{1}{4}$  mile. By keeping the two lights in one (the east having 9 reflectors, the west, or inner, but 3), you avoid the Tuns Bank, and will be in mid-channel. The course, by compass, for Magilligan Point, after nearing the east light, is, according to tide, from W.S.W. to S.W. by W., and from that to Moville W.  $\frac{1}{2}$  S. The west light is hid when you pass White Bay, by Green Castle; and the east light will barely be open to the southward as far as Moville, and with a small vessel to Clare River, which is near Red Castle; but caution is necessary standing to the southward, and the lights are not intended for guiding-lights after passing inward. At Moville, which is about  $2\frac{1}{2}$  miles above Green Castle, you can anchor in from 5 to 7 fathoms water,  $\frac{1}{2}$  a mile above the town, and from  $\frac{1}{4}$  to  $\frac{1}{3}$  of a mile off shore.

"There are two pilot stations, one close to the lighthouses, and one at Turmone, about 8 miles west of Innishowen Head; and the pilots are fined if they do not board a mile outside the great buoy of the Tuns, or a mile from Innishowen Head, weather permitting."

**RIVER BAN.**—To the eastward of Lough Foyle, and between it and the Skerries, is the River Ban, or Ban Water, a kind of creek, leading to Coleraine, fit only for small vessels; for in the channel over the bar are not more than 3 feet water, low spring-tides, about 10 feet at high water, and 8 feet at high water, neap-tides. The depth within the bar is nearly the same; and  $\frac{1}{2}$  a mile above the bar it dries quite across.

**PORT RUSH.**—E.S.E., 10 miles from Magilligan Point, on the west side of a projecting point, is Port Rush. This is a small place, now undergoing improvement; piers are erected, and a quay formed, so as to accommodate small vessels. There are from 8 to 24 feet within the harbour, and off the point of the western pier is a warping buoy,

in 5 fathoms; while off the mouth of the port a vessel may anchor, in from 6 to 9 fathoms. It is high water at 50 minutes after 5, full and change; and spring-tides rise from 7 to 8 feet, neaps 4 to 5. In turning round the projecting point, called Ramore Head, you will have 8 or 10 fathoms about a cable's length from the point; but it is advisable to give the head a good berth, as a *rocky shoal* projects a full cable's length from the point to the eastward of Ramore Point.

**SKERRIES.**—S.E. by E., about 10 miles from Innishowen Head, and W. by N., 5 miles from Bengore Head, are a *cluster of rocks*, both above and under water, called the *Skerries*. These continue for the length of  $1\frac{1}{2}$  mile, and are a mile from the shore. A ship may anchor off the middle of the largest Skerry Island, on its south side, where it appears lowest, in from 5 to 7 fathoms, the anchorage being well sheltered, and good holding ground. In sailing to this anchorage be careful to avoid the *Kerrs* and the *Stirk Rocks*. The former dries at 4 hours' ebb; it lies about  $\frac{1}{2}$  a mile in a W. by N. direction from the westernmost of the Skerries, and is in extent about  $\frac{1}{4}$  of a mile. In sailing between the Skerries and Port Rush, or Ramore Head, you avoid the Kerrs Rocks, by keeping  $\frac{1}{2}$  from the head, and  $\frac{3}{4}$  from the Skerries, or by rounding Port Rush Head, at  $\frac{1}{4}$  of a mile distance, where you will find from 12 to 14 fathoms.

The bay between Innishowen Head and the Skerries is all clean ground, and of moderate depth. Ships avoiding the Tuns Bank and the Kerrs may anchor anywhere at a mile from shore, in moderate weather.

**THE STIRKS**, or *Hen and Chicken Rocks*, are small, having several sharp tops. They lie about a mile to the S.E.  $\frac{1}{4}$  E. of the east end of the Skerries, and N.N.W.  $\frac{1}{4}$  W.,  $\frac{3}{4}$  of a mile from Dunluce Castle. They lie in the fairway of vessels intending to pass between the Skerries and the main, and are covered only at high water. On the north and west sides they are steep-to; but on the east and south sides it shoals  $\frac{1}{2}$  a cable's length off: you must, therefore, give them a berth accordingly.

**PORT BALLINTREA** is a small cove on the rocky shore, and almost dries at low water. It lies about  $1\frac{1}{4}$  mile eastward of Dunluce Castle, and westward 2 miles of the Giant's Causeway. On the east side of the cove there is a small dry pier-harbour, where fishing-boats resort to in bad weather.

**BENGORE HEAD and the GIANT'S CAUSEWAY.**—Running along by the shore, you approach Bengore Head, on the west side of which is that great natural curiosity, the Giant's Causeway. Some *sunken rocks* extend to the distance of  $\frac{1}{4}$  of a mile from Bengore Head; and rather more, N.N.E. from the head, distant  $\frac{1}{4}$  of a mile, lies a *sunken rock*, with only 2 feet at low water, having 10 fathoms water close to it. Bengore Head is composed of several capes and bays, containing a vast quantity of columnar basalt. The cape, called Pleskin, presents a magnificent gallery or colonnade, 60 feet high, with a lower gallery about 50. The lower ranges contain the most sharp and exact columns. Dr. Pococke measured the most westerly point of Bengore Head at high water, to the distance of 360 feet from the cliff; but was then told, that at low water it extended 60 feet farther upon a descent, until it became entirely lost in the deep water. Upon measuring the eastern point, he found it 540 feet from the cliff, and saw as much more of it as of the other part, where it winds to the east, and is, like that, lost in the sea.

"The Causeway is composed," says Dr. Pococke, "of pillars, all of angular shapes, from 3 sides to 8. The eastern point, where it joins the rock, terminates in a perpendicular cliff formed by the upright sides of the pillars, some of which are 33 feet 4 inches high. Each pillar consists of several joints or stones, lying one upon the other, from 6 inches to about a foot in thickness; and some of these joints are so convex, that their prominences are nearly quarters of spheres, round each of which is a ledge, which holds them together with the greatest firmness, every stone being concave on the other side, and fitting, in the most exact manner, the convexity of the upper part of that beneath it. The pillars are from 1 to 2 feet in diameter, and generally consist of about 40 joints, most of which separate very easily; and one may walk along on the tops of the pillars as far as the edge of the water.

"But this is not the most singular part of this extraordinary curiosity: the cliffs themselves being more surprising. From the bottom, which is of a black stone, to the height of about 60 feet, they are divided, at equal distances, by stripes of a reddish stone, resembling cement, about 4 inches in thickness; upon this is another stratum of the same black stone, with a stratum of red 5 inches thick. Over this is another stratum 2



tum 10 feet thick, divided in the same manner; then a stratum of the red stone 20 feet deep, and above that a stratum of upright pillars; above these pillars lies another stratum of black stone, 20 feet high; and above this again, another stratum of upright pillars, rising, in some places, to the top of the cliff, in others not so high, and in others again above it, where they are commonly called the 'chimneys.' The face of these cliffs extends about 3 miles."

From Bengore Head to Fair Head the bearing and distance are S.E.  $\frac{3}{4}$  E.,  $11\frac{1}{2}$  miles. Between, at the distance of  $4\frac{1}{4}$  miles from the former, is Sheep Island;  $2\frac{1}{2}$  miles beyond that is Kinbane Head. The passage between Sheep Island and the main has 7 or 8 fathoms in it; but it is too narrow for anything but boats. To the westward of Sheep Island are some *rocks* near the shore. About  $\frac{3}{4}$  of a mile E.  $\frac{1}{4}$  S. from Kinbane Head is a *rocky shoal*, of 4 feet, called *Carrickvanan*. You will clear it on the north side by bringing Bengore Head midway between Sheep Island and the mainland. Carrick-arede Point is about  $1\frac{1}{2}$  mile to the westward of Kinbane Head.

Between Sheep Island and Fair Head is Ballycastle Bay; and in the bottom of the bay, about 3 miles from Fair Head, is Ballycastle Harbour, formed at the mouth of a small rivulet near the town; and if the piers were kept in good condition, and the basin cleared of sand, it might afford good shelter for small vessels drawing 7 feet water. In summer, ships may ride near the west side of the bay, in 9 or 10 fathoms water, the Glass-house\* bearing S.S.W.: Sheep Island being shut in with Kinbane Head, and Clare House bearing on the top of the cliff near it. But near this anchorage there are some *small patches of foul ground*; therefore it will not be prudent to lie long here; and should the wind blow from the north or N.W., and a swell begin to set in, you must weigh anchor, and rounding Fair Head, make for Cushendun, Cushendall, or Larne.

The promontory of Fair Head exhibits pillars of greater length and coarser texture than those of the Giant's Causeway: the basalt of the latter is of a very compact texture; and the angles of the pillars have preserved their sharpness, although exposed to the sea for perhaps 3000 years, or upwards. Mr. Hamilton, who examined these singular structures, is of opinion that these pillars are magnetic, and affirms, that in the semicircular bays about Bengore and Fair Heads, the compass becomes considerably deranged.

**RACHLIN, or RAUGHLIN ISLAND.**—About  $2\frac{1}{4}$  miles northward from Fair Head is the south point of Rachlin Island. It thence extends nearly N.E.,  $2\frac{3}{4}$  miles, to the N.E. point, whence it turns suddenly to N.W.  $\frac{1}{2}$  W. and W. by S., about 4 miles, to the N.W. point, forming on its S.W. side a deep bight, called Church Bay, directly opposite to Ballycastle Bay. The ground in Church Bay is clean, and holds well, especially when a vessel gets so far in as to ride in 8 or 9 fathoms. The best anchorage is near the north side of the bay, when the church bears E.N.E., and the southern part of the island S.  $\frac{1}{2}$  E. There Fair Head will be quite shut in; and a small turret on a hill north-eastward of the minister's house will be in sight, eastward of another hill near it. There are two turrets on hills, one N.E., the other east of the above house, which may be mistaken for that first-mentioned, if their positions with respect to the minister's house be not duly attended to. With westerly winds a great swell of sea sets into Church Bay, and makes the riding very hard. In moderate weather, and with a westerly wind, a vessel may stop on the east side of Rachlin, in Achill Bay, near Doon Point, in 12 or 13 fathoms, gravelly ground, about  $\frac{1}{2}$  a mile from shore. Here is an eddy, formed with the flood, extending full 2 miles to the S.E. from Altacarry Point to Rue Point; and also a small one with the ebb, within which there is no current; but no vessel should stop the night during winter. Vessels coming from the north-westward may pass between Rachlin Island and the main, for in this passage there are no dangers, the Bull Rock (which lies off the west end of Rachlin and the Carrickvanan Rock, near Kinbane Head) excepted; and both these may easily be avoided, by keeping above a mile from the shore.

E.  $\frac{1}{4}$  N.,  $2\frac{1}{2}$  miles from the N.E. point of Rachlin Island, is the *Race of Sherinoe*, which breaks heavily in blowing weather, and is said to have only 15 fathoms over it, with a rocky bottom.

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\* The Glass-house and Colliery here have ceased to be worked for some years; and there is scarcely any part of the pier to be seen, it being nearly buried in the sand.

Captain Scoresby, from Greenland to Liverpool, observes, "The tides, which run strongly in the North Channel, between Rachlin and Cantire, were unfavourable, the ebb running longer outward than the flood sets in; our progress, therefore, to windward, under a press of canvass all day, was only 15 miles. On September 15th, wind S.E., blowing fresh, with hard squalls, we gained only 12 miles in 24 hours. At 10 A.M., tacked within 2 miles of Bengore Head; but before sun-set, we were driven by the ebb-tides several miles to leeward: the night dark and squally. Under the influence of strong tides, we navigated the channel and narrows, between Rachlin Island and Mull of Kinho, in much anxiety. This channel, in bad weather, has strong tides, and is encumbered with various dangers. On the afternoon of the 16th, we again stood in for Bengore Head, that we might obtain the advantage of the earliest flood-tide. I now intended to attempt the Sound of Rachlin, by which we should not only get much farther to windward than by going to the northward of Rachlin Island, but should have an earlier and stronger tide; with this view stood close along shore, passing within 300 yards of Sheep Island; but when we had nearly reached the western end of Rachlin, the wind headed us, and fell nearly calm. I now thought it prudent to bear up, and go to the northward of the island; when, having passed Rachlin, the wind became favourable, in consequence of which, and a strong tide under our lee, we were enabled to weather the Mull of Cantire at midnight, at the distance of about a mile. Here we had reached a different set of the tide; so that, had the breeze continued, we should have been benefited by the ensuing ebb, coming from the Frith of Clyde; but the wind again died away, and it became stark calm.

"The ebb, now beginning to run, first swept us to the westward, clear off the Mull of Cantire, and then round to the W.N.W., with an alarming velocity. In 15 or 20 minutes, the bearing of the Mull light changed from N. by E. to E. by N. Being now completely at the mercy of the tide, and in deep water, we could only sound occasionally, and have all in readiness for bringing up, if dangers became apparent; but the extreme darkness of the night, and fierceness of the tide, defied all ordinary precautions. At this critical period, a loud roaring was heard toward the north, which, at first, was mistaken for breakers in-shore. It was, however, only the effect of a fresh wind, which fortunately sprung up from the northward. The ship's head being turned to the S.S.E., we attempted to sail up the channel; but such was the rapidity of the tide, that, for 4 or 5 hours, when making  $5\frac{1}{2}$  or 6 knots' way through the water, we did not alter the bearing (the Mull light on the beam about  $\frac{1}{2}$  a point), and probably did not gain  $\frac{1}{2}$  a furlong of ground. At day-light the tide began to slack, and then we soon got clear of this dangerous and perplexing strait."

**TIDES.**—On the full and change days of the moon, it is high water at Tory Island, Horn Head, and Seep Haven, at 30 minutes past 5; at the Black Rocks in Mulroy Bay, at 40 minutes past 5; at Fannet Head, at 30 minutes past 5; at the entrance to Lough Foyle and Bengore Head, at 6; at Port Rush, at 50 minutes past 5; at the Skerries, at 40 minutes past 5; at Church Bay, in Rachlin Island, at 8; and at Ballycastle Bay, at 50 minutes past 5 o'clock.

Inside of Tory Island spring-tides rise from 10 to 12 feet, the flood-tide running 2 knots, neaps  $\frac{3}{4}$  of a knot; at Port Rush spring-tides rise from 7 to 8 feet, neaps 4 to 5; at Ballycastle Bay and Rachlin Island spring-tides rise 4 feet.

At Tory Island the flood-stream meets a branch that sets in from the north-westward; joining which, it sets towards Malin Head; where, toward the last 3 hours of the flood, the stream turns southward, and sets round Strabagy Bay into Lough Swilly. Off Innistrathull the stream again divides, one branch setting along the N.E. end of the island, the other along by the S.W. side, close to the shore. On the east side of the island they again join, and run in a S.E.  $\frac{1}{2}$  E. direction towards Rachlin Island, and thence through the North Channel. In this direction the stream of tides set along the offing on the north coast of Ireland, 6 hours each way; but nearer the shore, at half-flood, the stream turns to the westward, and at half-ebb to the eastward. Between Innistrathull and the Garvenys, when the wind meets the stream, it causes the sea to break as if the water was shoal, although there are more than 20 fathoms in the channel. Between Tory Island and Innistrathull, spring-tides run from 1 to 2 knots; thence to the entrance of the North Channel its velocity increases, and in Rachlin Sound runs 5 knots.

TABLE of MAGNETIC BEARINGS and DISTANCES of the PRINCIPAL PLACES  
on the SOUTH, WEST, and NORTH COASTS of IRELAND, from CARN-  
SORE POINT to RACHLIN ISLAND.

*Variation, 27 Degrees to 2½ Points West allowed.*

	Bearings.	Miles distant.
From Carnsore Point to the Tuskar Rock.....	E.S.E. ½ E.....	6
Tuskar Rock to the Black Rock .....	W. by N. ....	10
.....to Coningbeg Rock, off the Saltees	West .....	18
Coningbeg Rock to Hook light .....	N.W. ....	11
Hook Point of Waterford to Helwick Head .....	W.N.W. ½ W.....	23
.....to Ballycotton Point.....	W. ¼ N. ....	43
Ballycotton Point to Poor Head .....	W. ¾ N. ....	7
Poor Head to Roche Point, Cork Harbour .....	N.W. by W. ....	3½
.....to the Old Head of Kinsale.....	W. by S. ¼ S.....	16½
Old Head of Kinsale to Cape Clear.....	W. by N. ....	38
Cape Clear to Mizen Head .....	N.W. ¾ W.....	11½
.....to Lundy Island.....	S.E. by E. ¼ E. ....	179
.....to the Smalls lighthouse .....	E.S.E. ¼ E.....	142
Mizen Head to the Calf Rock, off Dursey Island...	N.W. ¼ N. ....	17
.....to the west entrance of Bear Haven	N. by E. ....	11
Bull Rock, off Dursey Island, to the Skelligs or		
Skellock Rocks .....	N. by W. ¼ W. ....	13
Skelligs to the Foze Rock, off the Blaskets .....	N. by E. ....	15½
The Blaskets (Tirraught R.) to Loop Head .....	E.N.E. ....	41
Loop Head to the Western Point of North Arran	N.E. ¾ N. ....	35
.....Eastern Point of Inishere.....	N.E. by E. ¼ E.....	34
.....Hag's Head .....	E.N.E. ....	28½
.....the Skirds ..	N.N.E. ¼ E. ....	41
Slyne Head.....	N. by E. ½ E.....	52
Inishere east point to Black Head .....	E. ¼ N. ....	9½
.....to Mutton Island, Galway ..	E. ½ N. ....	19½
Black Head to Mutton Island .....	E. ¾ N. ....	10
Slyne Head to Inishark (west point) .....	N.N.E. ....	12
Inishark (north point) to Achill Head .....	N.E. by N. ....	20
.....to the Black Rock .....	N.N.E. ¼ E. ....	26
Black Rock to Eagle Island.....	E.N.E. ....	14½
Eagle Island to Erris Head .....	E. ½ S. ....	3
Erris Head to Kid Island.....	E. ½ S. ....	5
.....to Stags of Broadhaven .....	East.....	8
Stags of Broadhaven to Downpatrick Head .....	S.E. ½ E.....	15
.....to Gessigo Point .....	S.E. by E. ½ E. ....	38
.....to Inishmurry Island .....	E.S.E. ....	39
.....to Teelin Head .....	E. ¼ S. ....	39
Teelin Head to west point of Arranmore Island ..	N.E. ¾ E. ....	20
Arranmore N.W. point to Tory Island light.....	N.E. by E. ¼ E.....	19
Tory Island light to Farland Point.....	S.W. ½ S. ....	6½
N.E. point of Tory Island to Horn Point .....	S.E. ....	7
.....to Melmore Head .....	E.S.E. ½ S.....	14
.....to Frenchman's Rock ..	E. by S. ¾ S. ....	13½
.....to Point Fannet light-		
house .....	E.S.E. ¼ S.....	19
.....to Malin Head.....	E. by S. ¼ S. ....	27
.....to Innistrathull light ...	E. by S. ....	34

	Bearings.	Miles distant.
From Frenchman's Rock to Horn Point.....	W. $\frac{1}{2}$ S. ....	7 $\frac{1}{2}$
..... to Melmore Tower .....	S. by W. $\frac{1}{2}$ W. ....	2 $\frac{1}{2}$
..... to Fannet light .....	S.E. $\frac{1}{4}$ E. ....	6
Innistrahull light to Malin Head.....	W. $\frac{1}{4}$ S. ....	6 $\frac{1}{2}$
..... to Glengad Head.....	S. $\frac{3}{4}$ W. ....	6
..... to Innishowen Head .....	S. by E. $\frac{1}{4}$ E. ....	15 $\frac{1}{2}$
..... to the Skerries .....	S.E. by S. $\frac{1}{4}$ S. ....	23
..... to Bengore Head .....	S.E. $\frac{1}{2}$ E. ....	27
..... to Rachlin Island (west point) ...	S.E. $\frac{1}{4}$ E. ....	33

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